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AUTHOR Bordia, Anil
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ABSTRACT

UNESCO has a long record of support for innovative activities in different countries. In India, UNESCO provides assistance for several activities in the field of technical and higher education. This paper describes the effort made in India to render higher education more relevant to the needs of the country and the extent to which the different innovations have succeeded or failed. Specifically, the paper provides a historical perspective and conceptual framework for the innovations. The innovations described include recapturing the spirit of ancient universities; experiments in rural higher education; the democratization of educational opportunity, and the modernization of the higher education system in both agriculture and technology. (JMF)

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SEMINAR ON THE PROBLEMS INVOLVED IN SETTING UP NEW TYPES OF HIGHER EDUCATION INSTITUTIONS AND PROGRAMMES IN DEVELOPING COUNTRIES AND REGIONS

(Paris, 5-8 October 1976)

# INNOVATION IN INDIAN HIGHER EDUCATION

by Anil Bordia
(Joint-Secretary, Ministry of Education, India)

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## Preface

This paper on Innovation in Indian Higher Education has been prepared at the instance of the Higher Education Division of Unesco. In the preparation of this paper, the author has had to make a difficult choice . The number of important innovations in Indian higher education is too numerous to be listed and described in one paper. In making the selection, therefore, the author has gone by the relevance of an innovation to the need of the country for a system suited to the changing socio-economic situation. Many important innovations, however, have remained unaccounted.

The author wishes to clarify in unambiguous terms that his official position in the Ministry of Education, Government of India, should not give the impression that this paper presents the official view of the Government; the views expressed in this paper are not necessarily those of the Government of India.

When called upon to prepare this paper, the author discussed the different aspects of the subject with a large number of friends and scholars. It was considered necessary to have background papers prepared in respect of a number of innovations; all of them were not included in this paper. Special acknowledgement is due for the preparation of background papers by Dr . J.N. Kaul, Dr. Uma Dasgupta, Dr. Ramlal Parikh, Dr. G.R. Bhatt, Dr. R.K. Singh, Pandit Sham Narayan, Dr. P.K. Passi, Professor Bakhshish Singh, Dr. N.K. Anant Rao, Dr. C. Prasad and Professor Prayag Mehta. The author also had the benefit of long discussions with Mr. J.P. Naik, which helped in clarifying several conceptual issues. The author acknowledges his deep gratitude to all these scholars. The opinions expressed in this study are, however, not necessarily those of the specialists who prepared the background papers but of the author alone. Similarly, the responsibility for any errors and misinterpretations is shared by nobody. In the editing of this paper, Dr. V.C. Bhutani has rendered invaluable assistance and Mr. P.R. Gandhi has tirelessly provided secretarial assistance.

New Delhi
26 July 1976

Anil Bordia

## INTRODUCTION

The pressures on higher education the world over are creating an unprecedented concern about the relationships within the university system and between the university system on the one hand and society and Government on the other. The situation in almost all campuses is explosive; the numbers of students are outstripping the effort to expand facilities. Students are restive not only about insufficient amenities, but also about the irrelevance of curricula, the authoritarian administrative system of universities and colleges and the general lack of understanding for student problems. The members of the teaching staff are restive about the unsatisfactory working conditions and unthoughtful treatment by senior colleagues and the university administration.

While teaching staff and students find the provision of facilities and conditions of work in universities unsatisfactory, the public is making increasing demands for universities to be made accountable for their use of public funds. A concern is also growing about the cloistered attitude of the universities and their aloofness towards national concerns. Several countries have therefore established a system of governmental supervision and coordination or created committees and commissions to do so on their behalf.

Although pressures and tensions like these are present in almost all countries, except those where educational planning is completely centralised, their manifestation in developing countries is particularly conspicuous.

Almost all developing countries have inherited from colonial powers a system of higher education build up along the lines of Western institutions and meant primarily to consolidate colonial dominance. In spite of the efforts made to adapt this system to their requirements, developing countries continue to find it largely irrelevant to their societal needs. The factors of irrelevance are many but the most notable among them are :

1. Its benefits go mostly to the privileged and it does not meet the rising expectations of the traditionally deprived sections of society or the growing demand for the democratisation of educational opportunity.

2. It does not serve the requirements of rapid economic and social development, which demands high-level technologists and experts in several fields.

3. It is wasteful, both because of its emphasis on general education with insufficient stress on technical and vocational education, and because of the widespread stagnation and low performance of a majority of students. As a result many of the young people turned out are unemployable and swell the ranks of the educated unemployed.

4. It is urban-centred in societies which are predominantly rural. Even the students drawn from the rural areas tend to be absorbed in the urban milieu. Thus rather than serving the villages, it further empoverishes them.

5. The medium of instruction is either English or the national/regional language. If the former, the students have the severe disadvantage of receiving education through a foreign language; if the latter, the students are again handicapped because adequate books have often not been published in those languages.

Every system explores ways of achieving greater concordance between national and societal needs and the system of education. In many developing countries, therefore, significant innovations have been introduced in the past several years. New uses of technology, particularly in the last 15 years or so, have opened new vistas for non-traditional learning. The most important aspect of the recent developments in the field of non-traditional learning is that hardly any country has been able to develop all the expertise it requires. The developing countries in particular will need to share experiences and ideas among themselves as well as with the advanced countries. It is, therefore, natural that the new International Economic Order, proclaimed by the United Nations, should open new possibilities for mutual exchange and assistance among nations of the world.

Unesco has a long record of support for innovative activities in different countries. In India, Unesco is rendering assistance for several activities in the field of technical and higher education, of which the following deserve mention :

(a) A Research Centre on Social and Economic Development in Southern Asia was set up in 1960. It functioned in close collaboration with the Planning Commission and the Institute of Economic Growth in New Delhi, and did some important work as an agency for developing studies in Social Sciences in the South Asian region. This Centre undertook studies on the influence of social and cultural factors on the productivity of industrial labour. In 1967, the Centre merged with the Institute of Economic Growth and continues to function with the Government of India's financial support.

(b) In the field of technical education, the most significant support has perhaps come for establishment of Regional Engineering Colleges, the most important characteristic of which was that to promote national integration. Each college reserved seats for students from States other than the one in which they were located. These Colleges made a significant advance by providing for a close link between industrial development and technical education. Unesco also supported the development of Indian Institutes of Technology as well as teacher-training programmes for engineering colleges.

(c) In the field of scientific research the main support was to Centres of Advanced Study and for development of special departments. This aspect of Unesco assistance is covered in detail in Section (i) of Group II.

The effort made in India to render higher education more relevant to the needs of the country and the extent to which the different innovations succeeded or failed is described in the following Chapters. The first part of this paper situates these innovations in their historical perspective, and outlines the conceptual framework used for the remainder of the study. Part II describes the specific innovations, while Part III provides a general summary and guidelines for the future.

# I

## HISTORICAL PERSPECTIVE AND CONCEPTUAL FRAMEWORK

Learning and education are an ancient tradition in India. Inscriptions on stone, copper and iron pillars, the palm leaf record of ancient texts and, in later days, the widespread manufacture of paper, literature distinguished by its antiquity and the intellectual subtlety of its contents, scholarly works on several branches of knowledge, including a wealth of scientific, medical, mathematical and astronomical writings dating back twenty-five hundred years and more could not have been created without an effective and durable system of informal and formal higher education.

In the era when the skills of language and script were a rarity, the philosophical concepts and fundamental ideas which helped the people to live in peace with nature and among themselves, were passed on orally from generation to generation. The social group whose members memorised the Sanskrit hymns, and also functioned as priests, came to be known as Brahmans. The exclusiveness of the language and the full-time character of learning of this type made higher learning in ancient times the monopoly of an exclusive caste. Even after the Muslim conquest, higher learning and its language continued to remain confined to an exclusive group; this language did not become that of the people. The higher education and learning systems established by the British in India thus fitted into the system most naturally - it too was for an exclusive group and not in the people's language.

The attempts made in modern times to fight against this basic characteristic of traditional higher learning in India, namely, its confinement to an exclusive group and in a language which is spoken and understood by a comparatively small section of society, is therefore not only an innovation in the contemporary context but a departure from an overwhelming historical tradition. However, the spell of ancient tradition over the Indian mind was irresistible and the reassertion of that tradition, in different moulds and varied forms, has been attempted by men of culture and imagination.

Although concern for the depressed and the down-trodden sections of society has always been shown by the privileged groups, this became a directive principle of state policy after independence was achieved in 1947. Several measures were introduced to serve these groups, which, if effectively implemented, could transform the whole system. Also after independence, education and research in science and technology were much more closely geared to the nation's social and economic needs. This called for bold institutional innovations; some of the changes which were introduced are already influencing the character and pace of the country's development.

To understand the innovations of recent times, we need to return to the times when the first Vedic hymns were sung and when learning took place at the feet of the great philosopher-gurus. This is the object of the first part of this paper; towards the concluding portion of this section we shall outline the conceptual framework within which the innovations may be viewed.

A. Higher Learning in Ancient and Mediaeval India

The main and perhaps the only fountainhead of creative energy in ancient times in India was religion as it was then understood by the people. This was more than a set of beliefs and rituals. It was a totality of ideas and ideals, practices and conduct called Dharma (lit. virtue, duty or the right path). Religion prescribed laws for social life and organisation, including economic pursuits. And it was religion which determined the aims, content and methods of education. Education, as it was then understood, was life-long even though its initial and formal stage terminated when a person was about 25 years of age. Learning which was a part of a living religion could not be acquired in ordinary class rooms. The pupil had to do disciplined and strenuous work and most important, to seek the Guru (lit. teacher) who would meet his special and individual needs. The student was required to leave his home and live with the teacher as a member of his family, pay fees if he could, or work while he learnt, if he could not. Contact with the teacher was essential if the student was to absorb the spirit of learning embodied by the teacher and to appreciate the subtle nuances of meaning and wisdom that emanated from the contact of two minds.

Although accent on the personal relationship between the teacher and the taught remained the hall-mark of Indian higher education in ancient times, the beginning of an organisational pattern can be seen even in the Rigveda, the earliest of the Vedas. There are references to samghas (lit. assemblies of learned men) which developed the language and philosophy of the Vedas. The Upanishads, which embody philosophical concepts that have been the object of scholarly enquiries for over two thousand years, were essentially conferences of sages. There were also scientific academies, like the Panchala Parishat. Later, Jainism and Buddhism and their missionary organisations helped create colleges and monastic institutions and mathas of learning. The mathas were the apex organisations with which various and distant colleges and centres of learning were affiliated.

It is not clear whether the explosion of knowledge, lay and religious, led to the establishment of the universities in ancient India or whether it was the universities which brought about the explosion of knowledge, or whether there was a pervasive renaissance of life and culture from about the 7th century B.C. to the 7th century A.D. which created an intellectual ferment manifesting itself, among other things, in the depth and diversity of knowledge and the rise ofthe university-level institution. By the 7th century B.C., the fame of the Taxila university, situated between the Indus and the Jhelum rivers (now in Pakistan), was attracting scholars from all parts of India, China and the Indo-China states. The accounts of two Chinese pilgrims, Fa-hien (5th century A.D.) and Hiuen Tsang (629-645 A.D.), indicate that the university had no defined campus or jurisdiction; it was primarily a settlement of teachers. What gave the place the status of a university was the fact that it was for a long time the largest of such settlements and had an unusually large number of teachers of eminence. At this university, there were special learning centres for the sciences, arts and crafts which included elephant lore, magic charms, spells for bringing the dead back to life, hunting, understanding of animals'cries, archery, medicine, etc..

Students at Taxila were admitted about the age of 16 after a

severe admission test and usually stayed with their teachers, paying fees for board, lodging and tuition either in cash or kind or, in some very special cases, in bonds which obligated a student to pay his fees when he could. There were no examinations or degrees. Studies were terminated when the "course" was completed. Class room procedure consisted of individual or group recitation under the direction of the teacher or the monitor. There were night classes for poor students who earned their board, lodging and tuition expenses by doing house-hold work for the teacher.

Nalanda is the closest approximation to the idea of a university as it was understood in mediaeval Europe. It had an organisation appropriate to a university, a well defined campus, stable and ever increasing sources of revenue, a graduated curriculum embodying the best scholarship of the times and a student-teacher body which reached the peak of 8,588 resident students and 1,500 teachers at one time. The university attracted students from all parts of India and from distant lands like Tibet, China, Korea, Japan, Burma, Sumatra, Java and Turkistan. The glory of Nalanda as a seat of learning is demonstrated not only by the number of foreign scholars who visited the university but also by the demands made on the university by foreign governments and institutions for the supply of books, translations and visiting teachers. Intellectual intercourse on an international scale remained an important programme of the university. In the university school of Tibetan studies, scholars translated learned Buddhist texts into Tibetan and created a literature which ultimately helped convert Tibet to Buddhism.

A distinctive mark of Nalanda was its academic freedom. It was the scene of ideological strife not only between Buddhist sects but also between Buddhist and Hindu orthodox thought, the latter being often backed by temporal power. All prevailing systems and schools of thought and all shades of opinion and belief in the country were well represented at Nalanda and all fought out their ideological battles in the great debating halls of the university. Nalanda became "the common meeting ground in the India of the times, of the warring sects and creeds with their possible and impossible doctrines", observed Hiuen Tsang. The spirit of the university exemplified the Indian principle of fundamental federalism which recognised contradictory factions, opposing ideologies and diverse deviations, provided they functioned within the limits set by the culture and the ethos of the people.

Teachers at Nalanda were drawn from all parts of the country, many of them came from other parts of the world also, particularly China, Tibet and the Indo-China region. The curriculum consisted of a study of Brahmanic, Buddhist and Jain religions and secular subjects like grammar, logic, medicine and Yoga and Samkhya Philosophy.

Nalanda had a dozen big auditoria and 300 smaller halls where about 100 lectures were delivered every day on various subjects. The library was housed in three buildings, one of them nine storeys high. Several kings and benefactors expanded and rebuilt the various halls and added more space by constructing on existing structures. Recent excavations have revealed layer upon layer of structures and of religions and beliefs reflected in the buildings of this great university.

Varanasi (Banaras) developed as a great centre of Hindu learning. Its beginning preceded Nalanda by several centuries, and also outlasted it. All great thinkers had to test the validity of their theories at Varanasi. Gautam Buddha preached his first sermon in 528 B.C. at Sarnath, about four miles from Varanasi; here came Samkaracharya to expound his philosophy of Advaita; Chaitanya and Nanak, Tulsidas and Kabir came here to learn and to teach. Organisationally, Varanasi was more after Taxila than Nalanda. Bernier, who visited India in the 17th century A.D., described the town as a general school and, as it were , "the Athens of the gentry of the Indies". The masters were dispersed over the town and each had a number of disciples. Some had four , others six or seven and the most famous 12 to 15, who spent ten or a dozen years with them. Apart from Taxila, Nalanda and Varanasi, there were several other seats of learning which continued to flourish even after the great ancient universities ceased to exist.

The ancient Indian system of higher learning had several significant characteristics. It was essentially religious. When religion meant a normative system of human conduct, the seats of learning reflected its wide meaning and sublimity; when, however, religion became confined to ritual and blind following of rules, the institutions of learning fostered that also. The system was primarily Brahmanical, in the sense that it was the monopoly of a learned caste, whether Hindu, Buddhist or Jain. The close contact between teacher and pupil was emphasised at all times, and the pupil was treated as a member of the family of the teacher. The medium of instruction was almost always Sanskrit, although study of other Indian as well as foreign languages was common.

The Muslim conquest of India took place at a time when Hindu, Buddhist and Jain institutions of higher learning, although in a state of decline, were full of intellectual activity. Between the 13th and 16th centuries A.D. sporadic attempts were made by Muslim rulers in India to create madrassahs attached or adjacent to mosques but unsettled political conditions and the lack of interest of some of the rulers precluded any institutions from taking roots. One king whose efforts need to be specially noted was Feroze Tughlaq. He was a great patron of learning and is credited with having established thirty colleges. At Delhi he founded a madrassah, a residential university where students and teachers were maintained at government expense. (1) It was Akbar, however, who gave a definite direction to education in mediaeval India.

Akbar was probably the first Muslim king who felt at home in India. He did not merely suffer his Hindu subjects; he treated them as his people and respected their scholarship and their institutions. His educational policies embraced both Muslims and Hindus. He got several Hindu epics and other secular treatises translated into Persian for the benefit of Muslim students. With the help of a full-time librarian he collected a large library of Sanskrit, Arabic and Persian books and manuscripts and divided it into two departments of science and history. For the first time in India during the reign of Akbar, large numbers of Hindus and Muslims went to the same school and studied the same courses in the Persian alphabet. In the colleges they were taught ethics,

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(1) N.N. Law, Promotion of Learning in India during Mohammedan Rule pp. 60-63.

arithmetic, accountancy, agriculture, geometry, astronomy, economics, physics, logic, natural philosophy and history. The college at Delhi had a distinguished faculty of Arabic, Persian and Sanskrit scholars. Akbar built state-supported colleges in all principal cities and opened their doors to all who sought higher education. Abul Fazl, the author of Ain-i-Akbari and a close associate of the emperor, records detailed instructions of Akbar on the organisation, curriculum, scope of compulsory and optional courses, methods of instruction and medium of education for every level of education, including higher learning. There is evidence to indicate that in the stability and peace that Akbar gave to India, the country was well set on the path of a synthesis of two cultures, and institutions of higher learning, like several other measures of this great emperor, were designed as instruments of such synthesis.

Akbar's son Jahangir and grandson Shahjahan were equally keen about higher education. They collected famous men of letters and science from all over the country and from abroad, set up new imperial colleges and endowed them handsomely, but they were less methodical and lacked the vision of Akbar's educational policies.

Aurangzeb went about expanding the Muslim component of higher education in India. He reversed Akbar's policy of equal respect for diverse faiths and cultures and ordered the destruction of temples and their colleges. But Aurangzeb set up great Muslim colleges all over the country. His contribution lay in providing Muslim youth the best available in Muslim learning. He died when his empire was in the process of disintegration; his successors completed the process. They had neither the interest nor the stamina to further the cause of higher learning.

Just as religion was the mainspring of higher learning during ancient times, so it was during the mediaeval period. In many respects the two systems were similar, although standing apart. Education in the ancient Indian universities and colleges was philosophical, abstract and theological; this was also the case in the madrassahs, but there was much more besides. The curriculum was wide-ranging and included mathematics, astronomy, sciences, medicine, logic and jurisprudence, etc. Institutional elitism was ensured by the use of Arabic and Persian in the madrassahs, just as Sanskrit held sway during the ancient period. The madrassahs introduced a new system, albeit similar to the ancient system in India, and it has continued to exist along traditional lines.

## B. Shaping of British Indian Higher Education

The East India Company, which was given its charter by Queen Elizabeth in 1600, acquired over the years, executive, judicial, legislative and economic functions in India. By a series of conquests and annexations, which began in 1757, the Company substantially subjugated India by 1857. A year later, the Company was superseded by the British Crown.

Till the beginning of the 19th century, the Company observed religious neutrality, eschewed proselytisation and encouraged classical learning in Sanskrit, Arabic and Persian. The Charter

Act of 1813 established the responsibility of the Company for education in India. With this Act, a fundamental debate in Indian education set off. It centred round four principal issues : (i) Should the Company encourage western literature and knowledge or should it strengthen the existing institutions of classical higher learning in India ? (ii) What should be the medium of instruction : English or classical languages such as Sanskrit and Persian or spoken Indian languages ? (iii) What should be the agencies of education ? And (iv) Whether the government should get involved in mass education or set up colleges for the elite who, on the basis of the downward filtration theory, would spread education among the masses. Prior to 1833, the orientalist view seemed to prevail both among Englishmen and prominent Indians although there were some powerful voices like that of Ram Mohan Roy who advocated a synthesis of eastern and western cultures. The pro-synthesis group, however, was divided in its ranks, one section demanding higher education through classical languages and the other through Indian languages . The debate between the orientalists and the advocates of synthesis was clinched by Macaulay. His famous minute, dated 2 February 1835, was accepted by William Bentinck, the governor-general. It laid down that all funds "be henceforth employed in imparting to the native population a knowledge of English literature and science through the medium of the English language".

By 1857, there were 27 colleges. The success and popularity of these institutions must have been impressive. In a government despatch of 1854 it was stated that "the rapid spread of liberal education among the natives of India .... the high attainments shown by the native candidates for government scholarships and by native students in private institutions, the success of the medical colleges... have led us to the conclusion that the time is now arrived for the establishment of universities in India". The Government of India passed the Acts of Incorporation of the universities of Calcutta, Madras and Bombay in 1857. All these universities were modelled after the university of London as it existed in 1857. The Panjab University was established in 1882 and Allahabad University in 1887. Although their Acts of Incorporation imposed no limit on their scope and activity, they conformed to the practice of the three original universities and confined them, for many years, to conferring degrees on those who passed its examinations in the affiliated colleges. Canning College, Lucknow, established in 1864, was the precursor of Lucknow University. Mohemmedan Anglo-Oriental College, established at Aligarh in 1875 by Syed Ahmed Khan, later developed into Aligarh Muslim University. In 1901-1902, there were five universities and 145 colleges with 17,651 students and 46 professional colleges with an enrolment of 5,358.

Between 1857 and 1902 social and cultural movements were led by Indians educated in these universities and a liberal leadership was beginning to demand more and better education; the Indian National Congress was founded in 1885. The universities, however, continued to be examining bodies and affiliating agencies, the colleges maintained the steady flow of their graduates and purveyed a series of courses which fitted their students well for subordinate posts in government, business and commerce. English continued to be the medium of instruction; and higher education became completely divorced from the mainstream of India's spiritual, cultural and community life. The universities and colleges did not participate as institutions in the social

religious, intellectual and political ferment that was brewing outside their portals.

The Indian universities Act of 1904 attempted to reform higher education and empowered the universities to provide instructions for students, to appoint university professors and lecturers, to hold and manage educational endowments, to erect, equip and maintain university libraries, laboratories and museums. The Act also included stricter conditions for the affiliation of colleges and provided for their periodical inspection. It enabled government to define for the first time the territorial jurisdiction of the universities. These changes, though forward looking in spirit, were of no avail in stemming the indiscriminate expansion of institutions of doubtful quality. The university system continued to grow in size and numbers and in 1921-22 , there were 65,652 students in 248 colleges.

The Calcutta University Commission (1917-1919) reviewed the functioning of that university and extended its conclusions to the entire system of higher education in the country. It pleaded for a university as " a place of learning where a corporation of scholars labour in comradeship for the training of men and the advancement and diffusion of knowledge". By this definition, the Indian universities, said the Commission, were not true universities. The recommendations of the Commission were of far-reaching importance and had a remarkable effect on university legislation in different parts of the country. The Commission designed model legislation for the establishment of universities and suggested teaching and residential universities. Aligarh and Lucknow universities were established soon after the submission of the report of the Commission and conformed to its recommendations. Several other universities which came into being between 1920 and 1930 also drew on the model. Other recommendations of the Commission included the reduction of government control over the universities, greater participation by teachers in the governance of the universities, closer cooperation between the universities and affiliated colleges and the appointment of full-time vice-chancellors.

Under the constitution introduced by the Government of India Act of 1919, the subject of education became a provincial responsibility, under a minister responsible to a legislature composed of elected and nominated members. The next important landmark in university education in India was the Report of the Central Advisory Board of Education on Post-War Educational Development in India (1). Although the section dealing with university education was a small portion of the report, it drew attention to some crying defects of the Indian university system, including the undue importance attached to examinations, the lack of personal contact between teachers and students, the inadequacy of financial support, the lack of schemes for assisting poor but able students, etc.. Most of the Board's recommendations were implemented. However, its suggestion that at least one-third of the students at universities should be assisted with scholarships and maintenance grants from government attracted little notice from the latter.

(1) Sargent Report, 1944

During this period, there were notable developments in professional education as well. In 1937, law education was imparted in 20 universities. The number of medical colleges increased from 4 with 1,466 students in 1901-1902 to 11 with 41,936 students in 1936-1937. In the latter year, there were 2,199 students in 8 engineering colleges in British India against 865 students in 4 such colleges in 1901-1902. The number of veterinary colleges went up to 5, all government institutions catering almost exclusively to government and military requirements. Forestry and art education continued to receive government support. By 1936-1937, eight universities had established commerce faculties. The six agricultural colleges and the two advanced agricultural institutes helped create better standards in this field.

Good as this record was, it was hardly good enough. Professional education was costly and confined to the upper classes; the real and pressing needs of rural India remained beyond its reach. Indian national opinion saw clearly the dangers inherent in a policy which cultivated in the minds of the educated a complex of inferiority. To counter such trends and to bring a measure of relevance to higher learning in India, a number of new institutions were set up in the country. Gujarat Vidyapeeth was founded by Mahatma Gandhi in 1920 to create a truly Indian alternative to the western form of higher education. Kashi Vidyapeeth was established in 1921 to revitalize ancient Indian learning. Jamia Millia Islamia was set up in New Delhi in 1920-1921. Visva Bharati was founded by the poet Rabindranath Tagore in May 1922, and Gurukul at Hardwar, though set up in 1902 as a school , started functioning as a degree-granting institution when it shifted to its present campus in 1924.

The decade 1937-1947 saw the setting up of five more universities and the doubling of university level enrolment from 126,288 (including students in universities now in Pakistan) in 1937 to 214,794 in 1946-1947. When the British left India in 1947 they left behind not a national system of education but an infrastructure on which India might build a national system.

C. The Post-Independence Era

Immediately after the achievement of independence, the need was felt for a "complete and comprehensive enquiry into all aspects of university education and advanced research in India" as the first step for the reorganisation of university education to meet the needs of national progress. The University Education Commission, headed by S. Radhakrishnan, was appointed in 1948 and submitted its report in the following year. The Commission made several important recommendations on the objectives of higher education, the equalisation of educational opportunity, administrative and organisational changes, the improvement of the quality and status of teachers, the establishment of a system of rural higher education and systematic financial support to universities. The aim of university education, the Commission said, was "to provide leadership in politics and administration, the professions, industry and commerce". In regard to the medium of instruction, the Commission recognised the important place of English but envisaged that Hindi and the regional languages would gradually take their place. Among other important recommendations of the

Commission was the establishment of the University Grants Commission, entrusted with the responsibility for allocating grants, planning higher education and maintaining standards.

India's Constitution adopted on 26 January 1950, is federal in character. Parliament as well as the State Legislatures have exclusive powers to make laws with respect to matters placed within their jurisdiction. The establishment of universities in the different States is an exclusive power of the State Legislatures. The State Legislatures establish universities by an Act and any change in the structure of that Act requires approval of the legislature by a formal amendment. The authority of the State Legislature is, however, restrained by the powers conferred on the Union Government. These powers include the authority to set up, or recognise, universities and other institutions of national importance by Acts of Parliament, and the coordination and maintenance of standards in institutions of higher education or research and scientific and technical institutions. As a corollary, the Union Government can make grants to the State Universities for the development and improvement of standards. Since the financial resources of the Union government are much larger than those of the States, this is a very important instrument through which the Union government can influence educational policy in the States.

An event of the greatest consequence in the progress of university education in India was the establishment of the University Grants Commission (UGC) in 1956 by an Act of Parliament. The University Grants Commission Act prescribed, inter alia that,

> "It shall be the general duty of the Commission to take, in consultation with the universities or other bodies concerned, all such steps as it may think fit for the promotion and coordination of university education and for the determination and maintenance of standards of teaching, examination and research in the Universities".

Its duties and functions include inquiring into the financial needs of the universities, allocating and disbursing funds to the Central Universities for their maintenance and development and advising the Union and State governments regarding the allocation of grants to universities, the establishment of new universities or the expansion of existing universities etc. The Act lays down that all universities set up by Acts of Parliament or State Legislatures would be covered by the provisions of the Act. In addition, section 3 of the Act empowers the Union government, on the advice of the UGC, to formally recognise any institution as deemed to be a university. After an institution is recognised as such, it enjoys the same status and can exercise the same powers as a university established by law.

During the 20 years of its existence, the UGC has become almost solely responsible for the disbursement of Union government funds to universities and other institutions of higher education, except technological, medical and agricultural institutions. It uses its authority to allocate funds to ensure that standards are maintained and to introduce educational reforms. Among significant educational reforms introduced by the UGC, mention should be made

of the Centres of Advanced Study, of correspondence courses and part-time education, improvement programmes for teaching staff, examination reform, teaching improvements in the natural and social sciences and the humanities, an elaborate programme of fellowships and scholarships, etc. The Commission has also made periodic recommendations for the revision of the salary scales of university and college teachers, and the Union government has by and large accepted the recommendations of the Commission. This has been a strong factor in the improvement of the status of teachers and in securing for them a reasonable standard of living.

The next important landmark in the field of higher education in India was the appointment of the Education Commission in 1964 with D.S. Kothari as Chairman and J.P. Naik as Member-Secretary. The Commission submitted its report in 1966 and included all stages and nearly all branches of education. The emphasis of the Commission in regard to higher education was on the development of selected universities and departments to attain the highest international standards. The Commission called for the strengthening of the Centres of Advanced Study and the establishment of a small number of 'major' universities. The argument of the Commission was that the scarce resources of the country needed to be concentrated to produce teachers of universities and leaders of society. The Commission further felt that the nation's outstanding scientists and scholars should not work in isolation under unfavourable conditions, but should be in constant communication with satisfactory conditions of work. As an extension of the idea of supporting selected institutions to attain the highest standards, the Commission also recommended the granting of autonomous status to individual colleges under the general supervision of universities. While the Commission was seemingly undemocratic in favouring selectivity, it also sought to promote the genuine equalisation of education opportunities. It recommended selective admission in universities and colleges, but it also suggested that selection procedures should be devised to overcome the limitations imposed upon bright young people of disadvantaged families by their upbringing and previous educational institutions. It also recommended that a large percentage of students who are able to benefit from higher education, but cannot continue their studies owing to financial difficulties, should be provided with adequate scholarships and fellowships. Persons outside educational institutions, the Commission felt, should be given opportunities to pursue higher education through programmes of part-time and own-time education by correspondence courses wherever feasible. It felt that this would also help to overcome the existing gap between the world of work and the world of learning. The Commission's most significant recommendation was in regard to the introduction of regional languages as the medium of instruction at the higher education level. It suggested a massive programme for the production and translation of books in regional languages, with a view to the move from English to regional languages as the medium of instruction within a period of ten years. It did not however, minimize the importance of English and recommended its continued use as a "library language".

The recommendations of the Commission were widely discussed and commented upon and a general consensus on the country's educational policy emerged. Parliament discussed a National Policy on Education

and adopted a resolution on the subject in July 1968. The resolution acknowledged that a radical reconstruction of education, on the broad lines recommended by the Education Commission, was essential for the economic and cultural development of the country, for national integration and for the realisation of the ideal of a socialist society. It made special mention of the need to evolve a system more closely related to the life of the people and called for a continuous effort to expand educational opportunity, to raise the quality of education at all stages, to develop science and technology and to cultivate moral and social values. The portion of the resolution relating to higher education is reproduced below :

University Education :

(a) The number of whole-time students to be admitted to a college or university department should be determined with reference to the laboratory, library and other facilities and to the strength of the staff.

(b) Considerable care is needed in establishing new universities. These should be started only after an adequate provision of funds has been made for the purpose and due care has been taken to ensure proper standards.

(c) Special attention should be given to the organisation of postgraduate courses and to the improvement of standards of training and research at this level.

(d) Centres of advanced study should be strengthened and a small number of "clusters of centres" aiming at the highest possible standards in research and training should be established.

(e) There is need to give increased support to research in universities generally. The institutions for research should , as far as possible, function within the fold of universities or in intimate association with them.

Part-time Education and Correspondence Courses :

Part-time education and correspondence courses should be developed on a large scale at the university stage. Such facilities should also be developed for secondary school students, for teachers and for agricultural, industrial and other workers. Education through part-time and correspondence courses should be given the same status as full-time education. Such facilities will smoothen transition from school to work, promote the cause of education and provide opportunities to the large number of people who have the desire to educate themselves further but cannot do so on a full-time basis.(1)

The record of the ten years following the submission of the Commission's report is not entirely gratifying. The concept of 'major' universities has not yet found acceptance and the Centres of Advanced Study are still being supported by the UGC. The idea of granting autonomous status to selected colleges has been accepted,

(1) National Policy on Education, Ministry of Education and Social Welfare, Government of India, New Delhi, 1974, reprint, pp.7-8.

but very few colleges have been given such standing. The idea of regulating admission to institutions of higher education without, however, denying entry to first generation learners, has been nationally endorsed and has been included in the country's Fifth Five Year Plan (1). The programme of scholarships and fellowships has been also enlarged but it is nowhere near reaching the dimensions recommended by the Commission. Organisations have been set up in almost all regional languages for the translation and production of books of higher education level. However, the programme has not proceeded fast enough to engender the confidence that regional languages can adequately replace English. Yet, in several parts of the country, regional languages are being used as the medium of instruction, particularly up to the undergraduate level.

To conclude this historical review, it would be useful to look at the growth of higher education during the post-independence era. This period was marked by an explosive growth of institutions as well as student enrolment, as shown by the following tables : (2)

TABLE I.1

Increase in the number of universities, 1947-1975

| Year | N° of new universities established | N° of institutions declared as deemed to be universities |
|---|---|---|
| 1947-1949 | 8 | Nil |
| 1950-1954 | 8 | Nil |
| 1955-1959 | 9 | 2 |
| 1960-1964 | 22 | 5 |
| 1965-1969 | 17 | 1 |
| 1970-1975 | 23 | 1 |

TABLE I.2

Growth of colleges according to courses of study

| Courses of study | Number of colleges | | | | |
|---|---|---|---|---|---|
| | 1970-71 | 1971-72 | 1972-73 | 1973-74 | 1974-75 |
| Arts, Science and Commerce | 2,587 | 2,798 | 2,998 | 3,126 | 3,172 |
| Engineering and Technology | 107 | 108 | 110 | 109 | 109 |
| Medicine, Pharmacy, Ayurveda, Nursing and Dentistry | 176 | 186 | 210 | 217 | 226 |

(1) Government of India, Draft Fifth Five Year Plan 1974-1979, Part II, p. 198.

(2) These tables are based on information supplied by the University Grants Commission.

| | | | | | |
|---|---|---|---|---|---|
| Law | 91 | 95 | 107 | 110 | 122 |
| Agriculture | 57 | 57 | 54 | 55 | 57 |
| Veterinary Science | 23 | 23 | 24 | 25 | 25 |
| Education | 258 | 269 | 287 | 295 | 307 |
| Oriental Learning | 226 | 272 | 275 | 274 | 269 |
| Others (Physical Education, Music and Fine Arts) | 79 | 88 | 93 | 97 | 101 |
| TOTAL | 3,604 | 3,896 | 4,158 | 4,308 | 4,388 |

TABLE I.3

Growth of student enrolment

| Year | Total enrolment | Increase over the preceding year | Percentage increase |
|---|---|---|---|
| 1964-1965 | 9,50,277 | 1,08,167 | 12.8 |
| 1965-1966 | 10,66,884 | 1,16,607 | 12.3 |
| 1966-1967 | 11,90,713 | 1,23,829 | 11.6 |
| 1967-1968 | 13,70,261 | 1,79,548 | 15.1 |
| 1968-1969 | 15,66,103 | 1,95,842 | 14.3 |
| 1969-1970 | 17,92,780 | 2,26,877 | 14.5 |
| 1970-1971 | 19,53,700 | 1,60,920 | 9.0 |
| 1971-1972 | 20,65,041 | 1,11,341 | 5.7 |
| 1972-1973 | 21,68,107 | 1,03,066 | 5.0 |
| 1973-1974 | 22,34,385 | 66,278 | 5.1 |
| 1974-1975 | 23,66,541 | 1,32,156 | 5.9 |

D. The Conceptual Framework

In a society's endeavours to establish a balance between education on the one hand and socio-economic and socio-cultural institutions on the other, there is a continual striving either to create educational forms which would lead to the desired social changes or to design educational forms which would suit changing social needs. In designing socio-economically and socio-culturally relevant forms of education, the leaders of society, in particular those concerned with education, are governed by certain motivations. These motivations are naturally based on the upbringing of the individual concerned, his educational background and his philosophical make-up. The motivations behind an educational innovation are, however, not restricted to the psycho-social background of an

individual or a group of individuals; in their responses to certain problems affecting education, these individuals relfect the society, its needs and aspirations and the prevailing undercurrent of thought. Each significant innovation is therefore the manifestation at once of the psycho-social background of the main persons involved in it and of a widespread social demand.

One of the persistent yearnings in Indian society has been an urge to revive the educational and cultural ethos of the ancient times. References to the wisdom of the sages who compiled or composed the Vedas, the Upanishads and other ancient scriptures, with the unique teacher-taught relationship, the community of teachers endlessly engaged in philosophical and spiritual discourses, the magnificient organisation of ancient universities like Taxila, Kanchi and Nalanda, are found in the writings of saints and scholars throughout history.

In modern times, the urge to revive ancient tradition manifests itself in several dissimilar streams. The effort made by some British scholars to establish departments of oriental studies and separate colleges for such studies was one such stream. It attempted to study ancient thought, philosophy and literature in the modern western context. It was also an attempt to by-pass the persistent attempt of nationalist Indians to revive ancient learning by its co-optation into the western system.

The second stream was the continuance of the indigenous institutions of pathshalas and ashrams. Several philanthropists and rulers of princely states supported these institutions and gave scholarships to persons desirous of pursuing studies there. This stream viewed ancient institutions as an unchanging system and, thus, it attracted little notice from the enlightened sections of society.

The third stream, which has emerged mainly after independence, was the establishment of Sanskrit universities and other institutions of Sanskrit studies. There are at present three Sanskrit universities and several colleges for Sanskrit studies. These institutions are organised on the lines of a modern university but the courses of studies and curricular planning are rather like the old pathshalas.

The fourth stream does not attempt to revive ancient institutions as they were, nor to study the ancient subjects as they were, but seeks to recapture the spirit of ancient universities. In this stream, there are two substreams : The Gurukuls and the Visva-Bharati. The Gurukuls - there are about 10 of them in the country-look at the learning process as a family of teachers. The emphasis is on Vedic studies and Vedic methods. All students are expected to reside in boarding houses and lead a life of austerity and self-denial. This is a group of institutions established as part of the Hindu reform movement, started by Dayanand Saraswati. On the other hand, Visva-Bharati, situated in Santiniketan, West Bengal, has many similarities with the ancient system of learning such as living in communion with one's teachers. Like the ancient Nalanda university, Visva-Bharati emphasises the study of Buddhism and that of neighbouring countries, e.g. , China, Tibet, South-East Asia, Sri Lanka. Out of these streams, and between Gurukul and Visva-Bharati, we have selected the latter for inclusion in this paper.

The revivalist motivation often served as the foundation of nationalist motivation; in fact the two often overlapped. The nationalist motivation, which spread over India in the first half of the 20th century, had two broad streams. One considered political independence as the basis of the struggle for freedom and the other maintained that social reform, primarily the improvement of the lot of the weakest sections of society and of women, would automatically bring about political freedom. Besides, this group believed that political freedom in itself would be of little avail without a change in social relationships. The two symbols of these streams in the first quarter of the 20th century were Bal Gangadhar Tilak and Gopal Ganesh Agarkar. Tilak was unequivocally for pre-eminence of political freedom; and the views of Agarkar, the reformist, were considered akin to the western liberal tradition and not suited for the struggle against British rule.

Gandhi synthesised the different schools of nationalist thought and created a philosophy which was uniquely Indian. In his plea for the removal of untouchability, in the importance he gave to the upliftment of women and in his emphasis on a composite national culture, he was the spokesman of the social reformist school of thought; but in his obsession with political freedom and in his belief that while social transformation must take place political freedom would not wait, he was a fighter for political freedom par excellence. While he gave the highest importance to political emancipation, he did not for a moment forget that India was a country of villages and that the focus must always remain on the village. Inspired by this motivation, several institutions were established soon after Gandhi launched the first non-cooperation movement in 1920. We have selected for this paper the most typical of these institutions, and the one to which Gandhi gave his closest attention, namely Gujarat Vidyapeeth.

Gandhian emphasis on village reconstruction and on making education subservient to the needs of the rural people also manifested itself in the establishment of several institutions conforming to his philosophy and drawing on the experience of the institutions set up in the early 1920s. From amongst this category of institutions we have selected Lok Bharati, which remains a success story to this day.

Gandhi's focus on the villages of India was also reflected in the report of the University Education Commission (1948-1949) and thereafter in the report of the Committee on Rural Higher Education. These reports resulted in the establishment of a number of Rural Institutes, which were the most significant attempt by the Government of India after independence to explore alternatives in rural higher education. This alternative, however, was almost a complete failure and in the post-independence history, Rural Institutes are referred to as a mere scheme or an episode. We have attempted to throw some light on this experiment.

Through the introduction of western education in India, a large number of Indians became familiar, first with the concepts of liberalism and liberty, and thereafter with those of equality

and socialism. Immediately after independence, these concepts became some of the most prominent features of the Constitution. It was no accident that when the Constitution was being drafted, India's Law Minister himself belonged to the untouchable community and in piloting the Constitution, he focussed the country's attention on the plight of the economically, socially and culturally weakest sections of society. The Constitution defined the weakest sections of society and laid firm foundations for a policy seeking to ameliorate their condition. The preamble to the Constitution explicitly required Government to follow a policy of justice - social, economic and political - and of equality - of status and of opportunity. Even after the Constitution was adopted, there was a continued movement towards greater equality and effective social reform. It was this motivation which inspired a persistent effort for the establishment of a system of equality of educational opportunity. The manifestation of this system was the extension of institutional facilities in geographically distant areas and the provision of special incentives and financial support to students coming from the weakest sections of society. In this paper we have considered this effort of the Government of India as a noteworthy innovation.

While the extension of educational facilities in distant areas and the provision of financial incentives made it possible for those who were willing to study on a full-time basis, there remains a category of persons who cannot attend institutions of higher education on a full-time basis, but are keenly interested in pursuing education. For these persons the universities have started correspondence courses, and since this is an important new development in instructional media, it has been included among the innovations described in this paper.

The search for alternative and non-traditional methods goes on. The Government of India is considering the establishment of a National People's University, which may include several features of the British Open University, but it would be much wider in scope. We have briefly alluded to this proposal also.

Institutions of advanced study and research in science and technology are of comparatively recent origin. The number of such institutions was small at the advent of independence. What is more, those institutions were meant, more or less, for the same purpose as other institutions of higher education, namely to prepare persons who could fill government posts. Just as the system of higher education established by the British had neglected the needs of the rural areas, the institutions of science and technology seldom promoted research, particularly applied research. The essential link between national development and science and technology has manifested itself in the post-independence period in many areas : medical education and health care, agricultural education and the development of agriculture, technological education and industrialisation, etc.. Immediately after independence Jawaharlal Nehru declared : "India must come out of the cowdung era". He was also fully conscious of the need for the application of science and technology to the people's problems and soon after becoming Prime Minister he appointed a committee to advise Government about the establishment of institutions of technology which would compare with the best in the world. Thinking on agricultural education and research also went side by side and

although the establishment of agricultural universities began only in 1960, importance had begun to be given to agricultural education and research immediately after independence. Similarly institutions of research and education for animal sciences, medical sciences, dairying, etc. were established. In this paper we have selected two categories of institutions for description and assessment, namely, the Indian Institutes of Technology and the Agricultural Universities.

Academic excellence is a motivation which has an ancient tradition in India; in recent times educational leaders have also included academic excellence in their view of the role of education in national development. To the ancient tradition of learning and knowledge was added the need to establish a few institutions of the highest standard which would enable scholars and scientists to work in close collaboration and in circumstances conducive to advanced academic and scientific work. It was with this objective that the UGC established the Centres of Advanced Study which are briefly described in this paper.

Not only was it necessary that scholars should be in contact with each other, but students must also be able to undertake interdisciplinary studies and the management of universities reorganised to make these possible. A number of innovative measures have therefore emerged in the governance of universities. Jawaharlal Nehru University was established to give practical shape to these ideas and a few innovative features of that university have been included in this paper. Another part of the chapter describing some recent innovations is devoted to examination reform, which has become one of the most topical subjects of discussion and deliberation in university bodies and intellectual seminars. It is believed that not only should it be possible to organise Centres of Advanced Study and to make management participatory, it should also be possible to entrust to the teachers the final responsibility for the evaluation of their pupils, as indeed is the case in most parts of the world. These three recent developments on the scene of higher education form part of the chapter which concludes the description of innovations.

## II

## THE INNOVATIONS

### Recapturing the Spirit of Ancient Universities

### A. VISVA-BHARATI

At the close of the Nineteenth Century, the cultural atmosphere in Bengal was stirred by the writings and actions of several enlightened persons who were educated in the British system but were rooted in the Indian tradition. One such person was Rabindranath Tagore, a fugitive from the British school system, who made a home and a university in Santiniketan, about 140 kilometers from Calcutta.

Visva-Bharati, the University established by Rabindranath was a reaction to the British system and an innovation with several dimensions. Located in a silvan setting with the teachers and students living as one community, it attempted to recapture the spirit of ancient universities and to provide opportunities for the harmonious learning of what was best in the Eastern and Western worlds. It gave importance not to bookish education received through rigorous teachers but to identification with the environment and with the rural setting. Although learning of English was not shunned, Bengali, Hindi, and other Indian and foreign languages had a place of prominence. Most important of all, at least initially, Visva-Bharati showed a total disregard towards the university system which aimed primarily at a degree.

#### A Poet's Vision

Visva-Bharati grew out of the Brahmacharya Asrama, the school established by Rabindranath, in the year 1901. In starting with a school, his immediate object was to do something permanent for the boys and girls of his country. He wished to establish a type of education whereby the children would learn creatively and enjoy the teaching given to them, assimilating it in a living manner. He himself believed intensely in freedom and desired the children who were being taught by him to have as much joy and freedom as possible. Study was not to be divorced from life itself. Teachers and children were to form a single religion-based family in harmony with the natural surroundings. Having himself suffered as a child from the soulless system of schooling prevailing in Calcutta, Tagore wanted to create an environment where children, instead of being "pelted with lessons", could grow up in an atmosphere of freedom, in close intimacy with nature and where teachers and pupils could live together as one community.

Tagore visited several foreign countries, including Britain, the USA and Japan between 1912 and 1920 and felt persuaded about the need to expand his educational experiment in Santiniketan into a centre where Indian culture would be studied in depth and variety, along with other cultures of the East, and where scholars

and thinkers of East and West could meet and collaborate in a spirit of mutual friendship and understanding. Visva-Bharati was formally founded in 1918 and Tagore selected a motto from Sanskrit : yatra vishvam bhavatyekanidam - "where the world makes its home in a single nest".

In December 1921 Visva-Bharati was inaugurated as a National University with an international outlook, as a centre of learning where the cultures of East and West may meet in a common fellowship. In that year itself, Leonard K. Elmhirst joined Tagore and the beginnings were made of a school of rural reconstruction at Sriniketan. Tagore used to say that educational improvement should begin with the nearest village.

Rabindranath used to ask himself, how the past life of India with all its ideals was to flower in the present. There were universities in India in the past, the forest schools or asramas, which had led the people into a thousand waves of activity. But ever since that period, with religion and society stifled by artificial restrictions, there had been no great universities. There had been tols, local institutions with local interests, but no institutions of thought and culture with universal interest. These were questions which were with the poet and he said :

> " In the modern time my turn has also come to dream of that age, towering above all ages of the subsequent history, in the greatness of its simplicity and wisdom of pure life ." (1)

By sheer force of his magnetic personality, as it were, Tagore drew a number of devoted persons from India and overseas to the seat of learning and living he was creating. In Visva-Bharati there was to be no room for opposing interests; there was to be only a common ground for scholars in facing the deeper problems of civilisation. Artists would create objects of beauty not for the benefit of a single country, but for the emerging entities of a world-wide civilisation. Visva-Bharati was to be a centre for seeking the truth about one another, a place where the West would be respected for its science, and the East for its pursuit of the divine ground of human relationship. For Tagore the ideals of education and of religion were too closely linked to be separated. "The object of education", he said, "is to give men the unity of truth".

## The Structure of the University

Elmhirst started the work at Sriniketan in February 1922, and with him were ten college students from Santiniketan who had opted to be farmers rather than academics, two members of the school staff, as well as the poet's son Rathindranath Tagore trained in the Agricultural Sciences. From the outset they had two principal objectives : to survey the economic, social and scientific needs of

(1) Rabindranath Tagore's Introduction in W.W. Pearson, Santiniketan, the Bolpur School of Rabindranath Tagore, pp.18-21.

the cultivator in his home, village and fields ; and secondly, to try out their own laboratory experiments in health, education, crafts, cultivation, animal husbandry, etc. Tagore believed that the life of the village had to be treated from all points of view at once, not from this, that and the other separately. Economic, social, religious, educational, intellectual, moral, hygenic - all these sides, he thought, had to be treated together since these were simultaneous aspects of human life.

Beginning with Sriniketan, Visva-Bharati gradually developed into a small world of separate educational experiments knit into one. What had begun as a school grew into a university with a distinctive culture of its own. By the time of Tagore's death in 1941 the world that was Visva-Bharati comprised the following institutions : Patha-Bhavana, the school, Siksha-Bhavana, the College of Science, Vidya-Bhavana, the College of Humanities, Kala-Bhavana, the school of Fine Arts, Sangit-Bhavana, the School of Music and Dance, Hindi-Bhavana, the School of Hindi Studies , all at Santiniketan, and the Institute of Rural Reconstruction and Silpa-Bhavana, the School of Cottage Industries and Handicrafts, at Sriniketan.

The Research Institute provided opportunities for research to advanced students and scholars in Hindu philosophy, Mediaeval Mysticism, Islamic Culture, Zoroastrian Studies, Bengali Literature and History, Hindi Literature and the study of languages, Sanskrit, Pali, Chinese, Tibetan, Persian, Arabic, Bengali, Urdu, Hindi, French, German and Latin. The Institute truly represented oriental culture in all its different aspects and as such was specially attractive to scholars from overseas. The Cheena-Bhavana was established in April 1937, in order to revive in Visva-Bharati Sino-Indian studies with the cooperation of Chinese and Indian scholars. It grew into an excellent library of Chinese Classics, History, Philosophy and Literature and attracted scholars and students from India, China, Tibet, Ceylon and Thailand.

The School of Fine Arts was a vigorous centre of artistic activity, teaching Drawing, Painting, Sculpture, Lithography, Etching, Fresco, Alpana or the painting of traditional patterns on the floor, with an emulsion of sun-dried rice, Embroidery and Needle-work, Batique or painting with wax, and Leather crafts . The School of Music provided comprehensive training in Indian Music and Dancing, classical, modern and folk. The School of Hindi Studies was established to facilitate exchanges of the creations of the various provinces of India in the domain of art, literature and philosophy, through the medium of Hindi. Through the Institute of Rural Reconstruction at Sriniketan the students at Santiniketan were given every facility to look beyond their academic work, to get in touch with the neighbouring villages and to know about the problems of villages at first hand.

There were no examinations at the end of the different courses conducted by the colleges. The diplomas were given on the basis of tutorial work and viva voce tests. Examinations and degrees were not in Tagore's scheme of education. But in due course, it became apparent that university recognition was of great use for some people and for all practical purposes he compromised over this issue. It was arranged with the help of the University of Calcutta that Santiniketan students would be graded in their final examinations by that University.

Tagore gave to Santiniketan not merely its ideal but also the greater part of its financial support as well as the beginnings of a very good library by making a gift of his personal library. The estate at Santiniketan, the Nobel Literature Prize Fund, and the income of the copy-right on all his Bengali works, all went to Visva-Bharati. Besides his personal efforts, financial support was received from a variety of sources. In one year, all the teachers and research scholars voluntarily gave back to Visva-Bharati one-tenth of their income. One of the ways of obtaining funds was world-wide appeals for subscriptions, donations and endowments. From its founding, right up to about 1950, Visva-Bharati received substantial contributions and donations from the rulers of Indian princely states, from industrialists and charitable trusts. In some cities, e.g., Bombay, Lahore and Patna, organisations sprang up for raising resources for Visva-Bharati. The people of Bankura and Birbhum, the two districts directly served by Visva-Bharati, set up organisations for raising funds regularly. Assistance from overseas was no less generous. A friend in America, who later married Elmhirst, made an annual contribution of Rs. 40,000 which made the running of the Institute of Rural Reconstruction possible.

However, resources were always insufficient for the programmes of Santiniketan and Sriniketan. For example, the total income in 1940-41 was approximately Rs. 32,000, and total expenditure approximately Rs. 63,000, leaving a deficit of about Rs. 31,000. Tagore in his last days was greatly worried about the future of the institution and undertook a strenuous tour in spite of his ill-health. This led Gandhi to assure him that he would arrange to meet the financial burdens of Visva-Bharati in Tagore's absence. Gandhi accordingly continued to make collections for the institution and Visva-Bharati continued without serious financial difficulties till his assassination in January 1948. In 1948-1949 the deficit rose to approximately Rs. 182,000. In that year Visva-Bharati was obliged to draw an overdraft of Rs. 200,000 from its bank. It was at this stage in 1951 that the Government of India declared Visva-Bharati a Central University and decided to take full responsibility for its financial needs.

The fusion

The Visva-Bharati Act came into effect in May 1951. This was the country's official recognition of an already existing university as an institution of national importance. The authorities at Visva-Bharati wanted this and welcomed it. Apart from the financial help which recognition by government brought to the institution, it also helped the institution indirectly by ensuring a greater market value to its degrees and diplomas. During Tagore's days his personal prestige was so great that students were attracted from India and outside even though they knew that the degrees and diplomas of Visva-Bharati were not recognised for purposes of employment. But after him the situation was changed. In a memorandum from the Visva-Bharati authorities to the Ministry of Education , it was stated :

> Indifference of the government, want of encouragement from the public and consequent paucity of students who would take up such a course of studies which did not provide for degrees recognised by the Government gradually led us to certain compromises. We had to seek for the affiliation for our school and college from the Calcutta University.

> This compelled us to train our students of the secondary stage and of the college for the examinations of the Calcutta University. In spite of this compromise we have been trying hard to retain the special features of the system of education designed by the Poet by providing a cultural development alongwith general education. But the curricula forced upon us by an affiliation falls short of the Poet's ideal and do not provide for that integrated system of education which he aimed at. It is not too late yet to return to the ideal of the Poet. As a matter of fact the whole institution can be reorganised on the plan designed by him provided we get the necessary support of a government charter. (1)

Government declared its intention to ensure that the objectives which Tagore had in founding Visva-Bharati were preserved and its traditions maintained. The Bill sought only to give support to the institution, not to change it. As Abul Kalam Azad, Minister of Education, said in Parliament, "As a matter of fact, by passing this bill, we are giving it nothing new or anything which it has not achieved already ". (2)

Since 1959, a further phase of reorganisation has taken place in the university, once again to stay on a par with the new educational schemes in the country, Patha-Bhavana, the school, was converted into a higher secondary school now offering an eleven-year course for the Higher Secondary School Certificate Examination. Vidva-Bhavana, the College of Humanities and Siksha-Bhavana, the college of sciences provide instruction for three-year B.A./B.Sc. Honours and M.A./M.Sc. courses in some selected subjects.

Even with all this Visva-Bharati was in a difficult situation for which there seemed to be little help. The basic problem was that the ideals of the institution had been essentially centred in one person, Tagore. And he was too original to be copied. Therefore, with Tagore gone the place appeared to be left without direction. The position was made more difficult owing to the quick turn over of the Acharyas and Upacharyas. (3) Although the persons appointed were all distinguished teachers of Visva-Bharati or eminent public men, with one exception their stay was short-lived. In 1969-1970 the campus was badly affected by the activities of left-wing extremists who were causing havoc on the political scene of Bengal. Visva-Bharati had obviously little or no staying power then to fight such external forces of disruption; the community at Santiniketan was left terrified and limp. Far from attempting to revitalize the ideals of its founder, Visva-Bharati was close to a

(1) A Memorandum on the Reorganisation of the Visva-Bharati, Government of India, Ministry of Education Records.

(2) On Visva-Bharati Bill, 25 April 1951, Parliamentary Debates, 1951, Part II, Proceedings other than questions and answers, p.7725.

(3) Chancellor and Vice-Chancellor.

breakdown. In 1971, therefore, an Ordinance was issued by the President of India vesting all powers in the Vice-Chancellor and the Executive Council. In 1974 a Committee of Enquiry was set up to look into the affairs of Visva-Bharati and to find out ways and means by which the main lines of emphasis laid down by Tagore for the development of his university could be revived under present circumstances.

Conclusion

Visva-Bharati no longer functions as an innovative institution. Yet somewhere, even if at the level of the subconscious, the sense that something has been lost haunts the place. All the outward structures of the innovation are still in existence : there is Sriniketan, for example, the like of which is not to be found in any other university campus. And there are, of course, the schools of Music, of Dancing and of Handicrafts. But what had been started half a century ago has not been brought forward. Moreover, like other institutions of higher education in India, Visva-Bharati is enwrapped in an unceasing cycle of examinations, all resulting in degrees, even though Tagore had always warned against putting too much value on examination results. The innovative idea of each individual striving for his truth in a suitable environment for it has been replaced by uniformity, the uniformity that lies in the modernity of standard courses and standard examinations. Tradition established by the Poet remains confined to the physical setting of Santiniketan, to its manner and its style of life, to the rituals of the choristers singing in the early morning, and the regularity of students and teachers going to divine service in the prayer hall, to the practice of celebrating the seasonal festivals with music and drama.

From its very inception the Santiniketan innovation in its entirety was in some ways defective. As a school it functioned beautifully helping the youngsters to grow healthy in body and mind and heart. This worked very well in the first stages of their development; later they would go to a run-of-the-mill college to prepare themselves for a wordly life. These two stages together made the individual a complete personality, beautifully and truly fit for the world. What the ordinary college could not give, Santiniketan used to give. Similarly the hardening that was required for a more pedestrian existence would have to follow the Santiniketan experience. But Visva-Bharati's aims were different and perhaps a little too broad. Visva-Bharati was to become a self-sufficient and independent university.

For a university of its kind to be successful three things were necessary : the most capable of teachers for every department of learning, the imposition of intellectual discipline and an appreciation of exact knowledge, and finally, an intellectual leader of high stature. In India preparation for intellectual discipline begins in the secondary stage, and it continues right up to the completion of the degree course. It is generally after that level that pupils are able to profit from the advanced university level courses. This is the famous "grind" which Santiniketan did not provide for. Yet, without the grind exact knowledge cannot be arrived at. In Santiniketan the intermediary phase entailing secondary school work through the Intermediate and B.A. Honours courses was weak and not sufficiently

cared for. This adversely affected the student's proficiency for a high quality post-graduate course. The trend at Santiniketan was for synthesis of knowledge, not for exact knowledge, not for the dry road to exact scholarship. There was almost a contempt for intellectual discipline in the Santiniketan environment. Tagore through his own exact knowledge of the Vedas and his own rigorous search for truth could afford this, but not the students of his school. What they claimed to be independence of the mind became almost a plea for laziness. Very few of the Visva-Bharati students were known to have taken up serious research.

The greatest drawback of the Santiniketan innovation was its dependence on one man, its founder, who was in any case a genius and hence not the product of any particular system. Very few teachers of Visva-Bharati were able to grasp his ideals and give them a practical shape despite their best intentions. The decline of such an innovation could hardly be prevented. Finally, when Visva-Bharati became a university under the University Grants Commission, everything had to be regularized on equal terms with other such universities, including the courses and the syllabi.

And yet the place has always been in the shadow of a strange paradox : this lies in a general expectation that Visva-Bharati should be unique because it started off as unique ; but the circumstances are making it almost impossible to reinstate the ideals of the Poet.

## Experiments in Rural Higher Education

### B. PROFILES IN GANDHIAN NATIONAL EDUCATION GUJARAT VIDYAPEETH AND LOK BHARATI

#### Philosophical background

By the year 1920, the shape of the system of education established by the British in India had become clear; imparted through the medium of English, it was alienated from the needs and problems of the country and strengthened the traditional Indian aversion to manual work. The universities, with a few exceptions, were primarily examining bodies, the courses of studies, methods of instruction and the system of examination dovetailed to the needs of an imperial power. It was in this context that Gandhi introduced the concept of a national system of education.

While still in South Africa and faced with the problem of educating his children, and those of other persons who lived in the settlement where he was living, Gandhi established the Phoenix School. At that school, Gandhi attempted to use education for inculcating love for freedom, fearlessness, mutual love and a life of which manual work was an indispensable part. Upon return to India in 1914, he extended cooperation to the British in the World War, in the hope that out of gratitude the British would grant India Home Rule. Those expectations were not met, however, and when the British Government resorbed to repression to curb the rising tide of nationalism, his faith in the British government gave way. Gandhi set out to educate the nation in truth, non-violence and non-cooperation with the British Government. Non-cooperation involved boycott of the British Government, British goods and British education. Gandhi travelled throughout the country and aroused people to follow the path of peaceful non-cooperation; through a system of national education he attempted to build cadres of young people committed to his philosophy. The national system of education was to develop respect for the Indian tradition of peace, non-violence and communal harmony and to encourage village reconstruction and respect for the mother tongue. A number of institutions of national education were established to train leaders for the national movement. These institutions included Gujarat Vidyapeeth, Kashi Vidyapeeth, Bihar Vidyapeeth, Tilak Maharashtra Vidyapeeth, Jamia Millia Islamia, etc. A large reservoir of highly committed workers, who have influenced national life in the last half a century, were produced by these institutions. Many of these persons have set up their own institutions on the lines of Gandhi's philosophy. In Gujarat alone, for example, there are at least five important institutions of this type, including Lok Bharati, at Sanosra. In this section of the paper we shall spell out in some detail the working of Gujarat Vidyapeeth, in Ahmedabad and Lok Bharati, in Sanosra (1).

The essential tenets of the national system of education as propounded by Gandhi can be summed up as follows :

(1) Vidyapeeth means an institution for the pursuit of knowledge and Lok Bharati means Peoples' Institute.

(1) Education must serve the nation's needs consistent with the philosophy of freedom, truth and non-violence.

(2) Equality of all religions and of all men.

(3) Equal importance to intellectual training and manual work, which should be socially useful and productive.

(4) Mother tongue as the medium of instruction at all levels along with the compulsory teaching of Hindi.

(5) The curricula and the educational arrangements should aim at serving the needs of villagers.

Gandhi firmly believed that education divorced from the needs of the country was a burden on the society. Gujarat Vidyapeeth was established at a time when he had launched the first non-cooperation movement against the British Government. As he said soon after the establishment of Gujarat Vidyapeeth :

> Even as I see the trees in front of me, I see that non-violent non-cooperation alone can be the salvation of India. And this College is the visible symbol of that great movement. I pray that this College may be accepted of God as one of the potent instruments with which we shall win our Independence.

Again, after 10 years of existence of Gujarat Vidyapeeth, Gandhi said :

> All those studying in national educational institutions and connected with them must do all the things that the country has to do and must go through the same discipline as the country has to go through for the attainment of Swaraj (lit. independence), so that they may be ready to offer themselves willing sacrifices when the time comes.

An ancient Indian saying was chosen as the motto of Gujarat Vidyapeeth : 'sa vidya ya vimuktaye', that is learning which liberates. In the ancient sense, liberation means liberation from worldly possessions, of soul from the body, in other words spiritual liberation. Gandhi, however, expounded it to give it a meaning in the context of the times. He said :

> He alone can attain that higher liberation who can win his lower liberation - the Independence of the country.

Even while he emphasized non-cooperation and independence, he did not overlook the two basic principles of his philosophy, truth and non-violence. The ends were important, but so were the means and this was the foundation of the national system of education.

National integration and synthesis, and tolerance of all established religions, was a fundamental principle with Gandhi. He was distressed by the strains between different religious communities in India, mainly Hindus and Muslims, and was deeply hurt by

the manner in which the untouchables were treated by Hindus belonging to higher castes. He gave the untouchables the name of harijan (lit. men of God) and preferred to stay with them whenever he travelled. It was a basic principle of Gujarat Vidyapeeth that the teachers and the trustees should regard untouchability as a blot on Hinduism, should strive, to the best of their power, for its removal and should not exclude a boy or girl for reason of his or her untouchability nor give him or her differential terms having once accorded admission.

As a reaction to the traditional Indian aversion to manual work, Gandhi identified aspects of manual work which had universal application and made it an essential feature of his entire educational system. The type of manual work he found universally acceptable beacuse of the ready availability of indigenous raw material, the simple technology involved in production, the possibility of working in any home and the product's easy marketability was Khadi, the hand-spun and hand-woven cloth. Although, Gandhi emphasized spinning and wearing of Khadi, it was not a dogma with him and any other type of useful productive labour would have been equally acceptable. Another justification offered by Gandhi for productive and efficient manual work was the possibility that educational institutions might earn at least a part of the financial resources they required. He viewed the educational system as it existed at that time, as so large a burden that it could never become a truly national system, encompassing all people of India, unless it was able to generate its own resources. He considered the traditional general education in the arts leading to a B.A. degree as wasteful and pleaded for courses and programmes which were needed by the nation. He would have preferred to vocationalise education at all levels from the primary to the highest.

Gandhi was alarmed by the effect which English-medium education had had in India. To be sure, he was not opposed to the learning of English, and to the great literature and thought in that language. What he did oppose, firmly and tenaciously, was the burden of English for all children of India. It seemed to him that more than half the time of the children was spent on learning English and mastering its irregular spelling and pronunciation. He felt that teaching through the English language made education for the millions of young people false and de-Indianising. He asked for a change in the medium of instruction at once and at any cost and pleaded that the provincial languages be given their rightful place. "I would prefer," he said, "temporary chaos in higher education to the criminial waste that is daily accumulation". (1) He hoped that Indian experts would speak not in a foreign language but in the language of the people and that knowledge gained by them would be the common property of the people. While emphasising the need for instruction through the mother-tongue, Gandhi was equally keen to develop a national language and he felt that Hindi-Hindustani, the language spoken by approximately half of India's population - Hindus and Muslims - living in North India, should be the national link language. He, therefore , launched campaigns in non-Hindi speaking provinces for the teaching of simple Hindi.

Gandhi never tired of reminding people of India's more than half a million villages where more than 80 % of the country's population lived. He felt that the growth of the nation depended not on the

(1) M.K. Gandhi. The Problem of Education, Ahmedabad, Navajivan, p.59

cities but on the villages and insisted that the bulk of the funds and a majority of the teachers in the national institutions set up under his inspiration should be deployed in the propagation of education conducive to the welfare of the villagers. The aspects of village life to which Gandhi directed special attention were the compulsory or voluntary idleness of most farmers, owing to small land holdings and their dependence on the monsoon. He therefore, emphasised the need for improved agriculture along with khadi and village industries, sanitation and hygiene and scientific dietetics. For him, an institution forming part of the national system of education was a place for the training of village workers.

Gujarat Vidyapeeth - A design for life-centred national education

The story of the establishment of growth of Gujarat Vidyapeeth can be briefly narrated. It was established in the wake of the first non-cooperation movement and at the time of its founding it was visualised as an arm of the national movement. Gandhi remained the Chancellor of the Vidyapeeth till his death in 1948, and in spite of his several absorbing pre-occupations connected with national affairs he never ceased to attend to the affairs of the Vidyapeeth. By 1925 there was already some concern at the diminishing numbers of pupils and the reduction in the number of institutions affiliated with it, and Gujarat Vidyapeeth decided to undertake an overall review of its operation. The review strengthened the conviction that the Vidyapeeth far from diluting its objectives of self-reliance, spiritual education and character building, should continue to work for the uplifting of the common man and should continue to focus on the needs of the villagers.

In 1928 Gandhi decided to reorganise the Vidyapeeth's structure, and a new constitution as well as a new system of management were established. The constitution spelt out the objectives of the Vidyapeeth more clearly, but they continued to conform to the fundamental philosophy of Gandhi. The Senate was persuaded to dissolve and hand over the affairs of the Vidyapeeth to a Board of Trustees, who were all distinguished public workers and freedom fighters.

The next phase of the intensive struggle for freedom in India began in 1930 and involved most of the students and teachers of the Vidyapeeth. Although several experimental measures were started between 1930-1947 and a section of the Vidyapeeth remained functional during parts of this period, for all practical purposes the institutions of higher learning in the Vidyapeeth were inoperative during this period. With independence, in 1947 the institutions of higher education resumed their work and a new type of institution, Mahadev Desai Samaj Seva Mahavidyala, the School of Social Service named after one of the most illustrious followers of Gandhi, was established. It focussed on the training of committed village workers through interdisciplinary studies in the social sciences. Until independence, Gujarat Vidyapeeth had steadfastly refused to become dependent on government grants or on individual philanthropists. After independence, however, while the financial needs of the institution grew larger, the sources of funds began to dry up. In 1963, therefore, in spite of much reluctance and after long negotiations Gujarat Vidyapeeth became an institution deemed to be a university under section 3 of the University Grants Commission Act (1). Since then

(1) For a description of this provision of the University Grants Commission Act, see Part I, Section C.

the Union Government meets the entire deficit on all items of expenditure of the Vidyapeeth and the UGC provides the development grants. The institution has, however, retained the essential characteristic of a Gandhian national education institution.

It is interesting to observe how an institution puts into effect the lofty ideals of Gandhi. This is what we now proceed to examine.

Academic curriculum

The academic curriculum in Gujarat Vidyapeeth aims at preparing not only good citizens but active workers for village reconstruction. For example, the course leading to the degree of Bachelor of Social Science is a three-year post-secondary course and consist of subjects like panchayati raj, (1) cooperative movement, accountancy, principles and practices of community life, Gandhian thought, a study of special issues in social service like prohibition, promotion of khadi centres, harijan welfare, tribal welfare, natural cures, etc. Every student is required to submit a dissertation based on a field survey of a socio-economic or cultural problem in a rural area. Since 60 % of the student body comprises persons from harijan and tribal communities, as well as other backward classes, the surveys enable those persons to understand their predicament and the causes thereof . It also helps the other students to understand the problems of rural development. Students progress from one academic unit to another at their own pace and can take the examination for a unit at their convenience. There are no failures, only specific achievement is indicated. In pupil evaluation, 60 % of the rating is based on curricular work organised throughout the year, including the academic programme, productive manual work, social service, community life, etc., and 40 % relates to a comprehensive written test on the curricular programme. The medium of instruction is the mother-tongue and there is regular communication not only between the teacher and the taught but also between the students and the rural community. Compulsory subjects include Hindi also.

Manual productive work

Side by side with the academic elements of the curriculum, Gujarat Vidyapeeth includes a strong component of manual productive work. Every student devotes two hours every day to such work. In addition, he participates in community spinning for 40 minutes a day and spends half an hour on community cleaning. It is compulsory for every student to undergo a five-month course in spinning cotton yarn and a training of equal duration in weaving. The weaving course includes cloth designing, training in unwinding of hanks, colouring the yarn., etc. Most of the students who graduate from Gujarat Vidyapeeth are proficient in spinning and weaving. It is believed by the followers of Gandhi that spinning and weaving can provide assured supplementary employment for people in the rural areas. Since most students of Gujarat Vidyapeeth go to work in those areas, their proficiency in spinning and weaving helps them to train the farmers in these skills. In the second year the students are introduced

(1) Panchayati raj refers to the form of local village government prevalent in India. In the State of Gujarat, where Gujarat Vidyapeeth is situated, this system of village government is strong and integrated with the development administration.

to a second craft - carpentary, agriculture or tailoring. Emphasis is on the efficient execution of craft work; the proceeds from the sale of articles manufactured in the craft centres, after deduction of expenses on raw material and processing, are given to the students. Several students are able to earn enough to meet a substantial part of their boarding expenses in the Vidyapeeth.

Social Service

The third element of the curricular programme in Gujarat Vidyapeeth is social service. This is important in that it brings the school and the community close to each other and helps discover the latent abilities of a student by enabling him to face the practical problems of life. The social service programme is devised in such a way that the student does not function as a mere observer but undergoes the experience directly, and becomes a part of economic and social institutions in rural areas, rural family life, adult and non-formal education, etc. The social service activities begin with a 15-day work camp which includes an essential component of manual work. Such camps are generally organised in remote areas to help the local people solve their specific problems and the students dig wells, deepen ponds, plant trees, build roads and construct soakpits and lavatories in village harijan colonies.

Another type of social service is in the form of study visits and participation in the work of rural service institutions, particularly in the poorer sections. The emphasis is on attitude building rather than the development of professional skills. In the final year, the students are placed for 40 days in rural and tribal educational institutions. Here they undergo experiences in teaching, serving, management of community life like mass prayers and community cleaning, etc. At the end of each year the overall performance of the student, along with the impact of his or her work on the community, is assessed by a committee and credit is given to the student in the total evaluation.

Whenever the occasion demands, the administration of Gujarat Vidyapeeth is willing to discontinue the academic programme to enable the students to focus on the emergent needs of the community. For example, in 1927, and again in 1970, Gujarat was hit by severe floods and the Vidyapeeth was closed down for a few months. The students helped to resettle about 800 families rendered homeless by the floods. On the occasion of the communal riots in 1969 and the influx of refugees from Bangladesh in 1971 . the institution was closed down, or a group of students was allowed to leave to work among the persons affected.

Community Life

Gujarat Vidyapeeth is a residential institution and community life is considered an important instrument for moulding the character of students and inculcating in them a spirit of self-reliance and community living. Community life is patterned after the ashrams of ancient times, and includes prayers and various communal duties such as cleaning the building and campus, cooking, serving in the dining halls and cleaning the drainage. The people in Gujarat

Vidyapeeth are proud of the fact that they have few servants and sweepers and a spirit of self-help pervades the institution. Participation of a student in community life is assessed by the warden at the end of the year and forms part of his curricular credits. For every 50 students there is a warden who works with them in all aspects of community life.

Rural Extension Work

The rural extension work of Gujarat Vidyapeeth is organised mainly through its six village service centres. These centres are situated in extremely backward areas. Apart from these centres, about 15 institutions run by Vidyapeeth graduates and 4 rural institutes operating on the same principles act as the institutional and organisational base for Gujarat Vidyapeeth 's extension work. The village service centres generally run primary and secondary schools on the lines of Gandhian institutions. The students who graduate from the secondary stage are admitted to Gujarat Vidyapeeth if they wish to pursue higher studies. In addition to the service centres Gujarat Vidyapeeth runs a number of village libraries, farmers' training schools, adult education classes in Hindi and khadi and village industries centres. All these field units are organically linked with the work of Gujarat Vidyapeeth and contribute to the education of its students.

More than 50 years after its establishment, Gujarat Vidyapeeth continues to abide by the basic principles established by Gandhi. There are, however, perceptible signs of change from the original concept. Originally, it was hoped, and that continued to be the position till 1963, that Gujarat Vidyapeeth would not look to government for financial support but would generate its own resources and would subsist on small contributions from its friends and alumni. This became increasingly difficult with rising costs and owing to the gradual change in the attitudes of teachers. Although teachers and students continue to do their own cleaning and emphasis is still placed on self-reliance, a number of cooks have been appointed and the number of office attendants and helpers has increased. However, the original spirit subsists . It is to the government's credit that it has not interfered with the working of the institution, although it has borne full financial responsibility for its operation. The pattern of education continues to be life-centred and aimed at work in the villages. Of the approximately 1,600 students who have graduated from Gujarat Vidyapeeth since its founding, more than 80 % have gone to work, in one capacity or another, in the rural areas. Owing to their proficiency in crafts, they have been able to run primary schools very much in accordance with the Gandhian pattern. The atmosphere in Gujarat Vidyapeeth is still permeated by a basic simplicity and lack of ostentation and the emphasis on character building and commitment to the villages persists.

Lok Bharati - Gandhian Rural Higher Education

Gujarat Vidyapeeth fostered the growth of constructive talent. Hundreds of persons, who had been deeply influenced by Gandhian thought, were impatiently striving to find outlets for their own creativity. One such person was Nanabhai Bhatt, who worked as the second Vice-Chancellor of Gujarat Vidyapeeth, from 1925 to 1928,

and who was himself an original thinker. He established an educational institution near the city of Bhavnagar in the State of Saurashtra (now part of Gujarat) and experimented with new educational methods and ideas. After working there for several years he felt the need to reside among villagers and started a school on the Gandhian pattern deep in the villages. In his school agriculture and animal husbandry had a place of greater importance than spinning and weaving, which, along with other village handicrafts, were, however, not neglected. On the basis of his experiments and experiences, he framed a course programme for Gandhian Rural Secondary Education and called it Lokshala (1). After the advent of independence and the establishment of the State of Saurashtra, the government accepted the curriculum drafted by Nanabhai Bhatt for all the schools. Soon it was found that most of the students graduating from these Gandhian secondary schools had no opportunity for higher education of any kind because they found it difficult and inconvenient to join a college affiliated with a university. At about this time the Government of India set up the University Education Commission (1948-1949) which made important recommendations regarding rural higher education. Nanabhai Bhatt, who was familiar with the Vidyapeeths established by Gandhi, integrated that concept with the recommendations of the Radhakrishnan Commission and in May 1953 established Lok Bharati.

Lok Bharati was explicit in its debt to Gandhian thought and the Vidyapeeths. It hoped to bring out the latent strengths in rural society through education and in a way compatible with Indian culture and nature. Nanabhai Bhatt declared :

> Rural people are illiterate, but it is wrong to believe that, therefore, they are not cultured. Culture is lying dormant in the life of the poorest of villagers. Lok Bharati aims at awakening them to this culture through the unflickering lamp of fundamental education . Knowledge is of two kinds, sterile and fruitful. Sterile knowledge is as worthless as a barren cow. Knowledge worth its name is that which frees its recipients from the three-fold pains - physical, social and spiritual.

When Rural Institutes were established in 1956 and the National Council of Rural Higher Education was established, Lok Bharati became a Rural Institute receiving grants from the Union Government. It did not, however, accept large sums of money and decided to continue as an institution which itself generated a substantial part of its financial resources. Even after the Rural Institute at Lok Bharati became a part of the system headed by the National Council, it continued to award its independent degrees which were recognised by the State Government. This helped Lok Bharati to survive after the Rural Institutes scheme was discontinued by the Union Government. At one time it desired to be an autonomous part of Gujarat Vidyapeeth but the latter did not favour running an affiliated type institution. Lok Bharati, therefore, secured affiliation with Saurashtra University in such a way that it retained its autonomy and prepared students for a degree course specially devised for it by the University, namely the Bachelor of Rural Studies.

(1) Lokshala means people's school.

Financially, Lok Bharati has become somewhat dependent upon government resources. Of its total expenditure, 60 % is met out of grants from the State Government, and the Union Government also gives a small recurring grant. The balance, approximately 20 % of expenditures, is earned by Lok Bharati out of its agricultural and other operations.

Academic Curriculum

The innovative characteristics of Lok Bharati are similar to those of Gujarat Vidyapeeth, with the difference that the former gives the impression of being more rigorous and more integrated in regard to the learning process. The academic curriculum has been structured separately for the one-year pre-university course and for the three-year course leading to a degree. The pre-university course is of a general nature and includes instruction in Gujrati, Sanskrit, English, Hindi, Economics, Accounts and Book-keeping, Physics, Soil Science, Crop Production, Animal Husbandry and Horticulture. Similarly, the first year course is also a general course in which, in addition to the subjects of the pre-university course, Political Science, History and Educational Psychology are added. After the first year the course is divided into two streams, namely, Education and Agriculture. The students of the Education stream have to select one major subject from amongst Gujrati, Hindi, English, Cooperation and Panchayat and Economics, and those of the Agriculture stream, from amongst Agronomy, Horticulture, Animal Husbandry, Dairying and Cooperation and Panchayat. While considerable emphasis is laid on an intensive study of the major subject, the students are called upon to study all other subjects also. In the Agriculture course, 60 % of the subjects are in the natural sciences and 40 % in the social sciences and the humanities, while in the Education course, 60 % of the curriculum is devoted to the social sciences and humanities and 40 % to the natural sciences. There is a firm belief that although there is a need for specialised knowledge and enquiry from the very beginning, no category of students can be exempted from a study of the natural sciences, the social sciences or the humanities.

Manual Productive Work

The curricula give considerable importance to manual productive work. Every student is expected to put in 350 to 400 hours of manual productive work each year. The year is divided into a work semester and an academic semester. During the work semester, the students engage themselves in hard manual work on a full-time basis. The manual work, however, is in the area of the major subject chosen by each student and considerable attention is paid by the staff to ensure that learning from manual work is related to the academic programme. The manual work projects are also chosen with a view to generating community resources. A few years ago when there was acute famine caused by drought in the areas surrounding Lok Bharati the students were sent some distance to work on an irrigation canal and to assist farmers in harvesting their crops. In the last few years, as a result of tenacious and well organised manual productive work, Lok Bharati has been able to construct a large check-dam near the institution, which has more or less solved their irrigation problems and assured their supply of drinking water.

During the academic semester every student also works for about 30 to 40 minutes every day on community spinning.

Social Service

The third characteristic of the curricular organisation in Lok Bharati is social service. Like manual productive work, social service is integrated with the academic programme. The number of weeks spent on social service is as follows :

| | |
|---|---|
| For pre-university students | 2 weeks |
| For first-year students | 3 weeks |
| For second-year students | 4 weeks |
| For final-year students | 12 weeks |

A part of the social service programme is always conducted in the tribal areas. In the second and third years, the programmes are organised in accordance with the stream and major subjects of the students. For example, the students of the Education stream, work on the balwadis (lit. nurseries) and as primary school teachers and while doing so, bathe the children, cook their food, make toys with indigenous materials and keep a record of their experience relating these to the theoretical knowledge acquired. It, therefore, serves as the practical side of their course in education. Similarly, students of the Agriculture branch engage in agricultural extension work and farm economics and similarly keep a record of their experiences seeking to correlating them with their theoretical knowledge. In the final year, an additional requirement for all student is to adopt two families within a radius of 10 miles from Lok Bharati and pay a weekly visit to them. They are expected to become assimilated to members of these families and help them understand the objectives of Lok Bharati, its programmes, problems in the progress of the country and the rights and responsibilities of a citizen. It is a measure of the sincerity and effectiveness with which social service programmes are organised that there is always a demand from the rural areas for students of Lok Bharati to go and work with them.

Community Life

Finally, Lok Bharati is a co-educational residential institution. Considerable importance is given to community living which is organised on the lines of Gujarat Vidyapeeth. The students clean the rooms and campus, but cooking is done by full-time cooks. There are no morning prayers; evening prayers are also optional. There is considerable emphasis on the organisation of cultural programmes.

In conclusion, it can be states that Lok Bharati has been able to adhere to its fundamental principles. It does not work for the villagers, but with them. Out of approximately one thousand graduates that have come out of Lok Bharati, 90 % are working in rural areas as teachers, agricultural extension workers, secretaries of cooperative societies and the like. The organisation of the curricular programmes, academic as well as practical, is indeed rigorous and demanding. From all accounts, however, owing to the manner in which the teachers involve themselves with the work and excursions of

students, the latter do not resent the arduous nature of their work but enjoy it as an essential and fruitful learning process. The reasons for the success of Lok Bharati are to be found in the intense commitment of its founder, the group of devoted workers he has been able to put together and the positive response of the community.

Since the establishment of Lok Bharati, four institutions have come up in different parts of Gujarat which function more or less on the lines of Lok Bharati. All these institutions and Gujarat Vidyapeeth coordinate their activities and mutually assist one another in the planning of programmes through an association of Gandhian institutes of Gujarat.

## C. RURAL INSTITUTES

In 1956 by an order of the Government of India the first few Rural Institutes were established. The idea of institutions of higher rural education was a subject of discussion and debate ever since the submission of the report of University Education Commission in 1949. Even before that, Gandhi had pleaded for an educational system attuned to the needs of the villagers.

Background

Higher education in India was highly urban-oriented. Gandhi grasped the problems created by the urban-centred educational system and strove for the establishment of a system of education for the villages. As a result of his strenuous efforts and the spirit he was able to inspire among his followers, a number of institutions with a marked village orientation were established. However, although Gandhi uniquely influenced the course of Indian history, he was not able to pursuade the Government of India to undertake an immediate and radical transformation of the educational system. His ideas, however, greatly influenced the University Education Commission (1948-49).[1] The recommendations of the Commission on Rural Higher Education began with the following statement :

> The general advancement of rural India will call for an ever increasing range and quality of skills and training. To supply these and to meet the requirements of an educated citizenship, a system of rural colleges and universities is necessary. A new beginning is desirable, with freedom to create a distinctive tradition as to purposes, spirit and methods.

The most significant aspect of the observations of the Commission was its realisation that a system of rural higher education could not be grafted on the existing primary and secondary school system, whose primary objective was to prepare students for admission to the existing university system. The Commission recommended acceptance of the Gandhian system of primary and post-primary education, and visualised it as a preparation for the system of rural higher education they were recommending. The system of higher education envisaged by the Commission was quite elaborate; there were to be rural universities to which would be attached a string of small residential under-graduate colleges; specialised university-level facilities would be situated at the university centre. Each college was to have about 300, under-graduate students the total student strength of the university, alongwith that of the cluster of colleges, was expected to reach about 2,500. It was envisaged that several clusters, with a university at the centre, would be set up. The Commission recommended a core of liberal education along with a number of subjects of special relevance to rural life. With regard to the administration of the rural universities and colleges, the Commission suggested that they should maintain independence and self-direction. A number of small rural

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[1] For the general recommendations of the University Education Commission, see Part I Section D

universities with a cluster of colleges were to be grouped under a regional Council of Rural Higher Education with an all-India body at the top.

An important development after the submission of the report of the University Education Commission was the emergence of the Community Development programme, visualised as a method for rural transformation. It was envisaged that the programmes of agriculture and animal husbandry would be served by a system of co-operative societies which would provide facilities for credit, servicing, marketing, processing, etc. Besides, village industries and handicrafts were to be encouraged, along with support for the traditional village self-government institution, the panchayat. Social education was to be an important element of the Community Development programme, indeed the entire process was visualised as educational and emphasis was on people's participation in development. The first few blocks under the Community Development programme were launched in October 1952.

The Government of India, in 1954, appointed a Committee to look into the question of Rural Higher Education. The Committee was headed by Dr. K.L. Shrimali, who subsequently became Education Minister. The Committee was asked to undertake a comprehensive survey and appraisal of the promising institutions and experiments in the field of higher education in rural areas, to determine which specific programmes and institutions should be encouraged to carry out experimental work in the field, and to recommend a possible pattern of education so as to evolve a reasonably uniform system suited to the needs and resources of the country. The Committee, which submitted its report in 1955, recommended the establishment of Rural Institutes, preferably one in each district, with due regard to the occupational needs of the rural students, to bridge the gulf between culture and work, between the humanities and technology and between the practical and the ideal. It also recommended that the responsibility for extension work should form an essential part of rural higher education. The Committee hoped that these rural institutes would work in close cooperation with all the educational institutions which were being developed to train personnel for the Community Development programme. The main idea was to give the rural youth the best that a university could offer, but the education was to have a rural bias with emphasis on the application of knowledge gained in the class-room to actual life situations. In order to achieve its objectives, the Committee recommended:

- a three-year diploma course in rural services
- a one-year course for a teaching diploma
- a two-year certificate course for women rural health workers

- a two-year certificate course in rural engineering leading to a diploma
- a two-year course in the agricultural sciences.

Establishment of Rural Insitutes

Immediately after the submission of the report of the Committee on Rural Higher Education, the Government of India took steps for the establishment of the Rural Institutes. The functions of the Institutes were visualised as being three-fold, namely, teaching, research and extension, and it was emphasised that these three functions must always be integrated if anyone of the three was to be truly successful. A total of 14 Institutes were established in different parts of the country between 1956 and 1963. They were all non-gouvernment voluntary institutions, with a long and distinguished tradition of service to the community where they were located. The heads of the institutions, by and large, were inspired with a sense of service to their fellow-men. Yet within about ten years of the beginning of this important experiment, it became clear that it would not last. In 1972 all the Rural Institutes were advised to affiliate themselves with the nearby-universities and to seek financial support from the State Governments.

This important experiment did not fail for want of effort on the part of the Government of India or the Institutes themselves. As recommended by the Committee on Rural Higher Education, the National Council of Rural Higher Education was established as the highest policy-making body entrusted with the responsibility of supervising the progress of Rural Institutes, organising examinations and advising the Union Government on all issues relating to rural higher education. The Education Minister himself was Chairman of the Council and its membership included the following:

- Directors of all the Rural Institu
- officials of the Ministry of Education
- representatives of other Ministries with whom coordination was necessary, namely, Ministries of Agriculture, Community Development, Health and Finance
- eminent educators
- constructive voluntary workers.

The National Council met infrequently and most of its work was done by the appropriate division of the Ministry of Education under orders of the Chairman of the Council. A senior officer of the Ministry was given the responsibility for the establishment and development of

Rural Institutes. The Ministry appointed committees to review the operation of various Institutes, conduct examinations, and for other ad hoc purposes. But placing the secretariat of the Council in the Ministry did make it function like a branch of the Ministry, with the Ministry of Finance having a final say in all important matters having financial implications. Suggestions were made from time to time that the Council should be detached from the Ministry and given autonomous status and that the Ministry, rather than arrogating to itself the functions of a university, should discharge what are its essential functions, namely, laying down policy, providing funds for its execution and ensuring that they are properly used. For a variety of reasons, however, this approach could not be implemented and the work connected with the Rural Institutes has remained a small part of the functions of the Ministry of Education.

Aspects of the Rural Institutes programme

The curricular programme for the Rural Institutes was framed by a high-powered committee of eminent educators, in accordance with the aims and objectives of the scheme. The Committee assigned itself the task of designing courses for village teachers, village health workers, agricultural extension workers, rural engineers and secretaries of village panchayats. The curriculum was to be geared to the comprehensive development strategy of the Government of India, through community Development. The Committee, therefore, gave the highest priority to a course of three years' duration after the secondary stage, and called it a Diploma in Rural Services. The aims of the three-year diploma course were as follows:-

(a) to produce progressive villagers and indigenous leadership, with a new outlook on life;

(b) to maintain good standards of education acceptable to the organised institutions of higher learning, including universities, so that the diploma awarded after successful completion of the course may make them eligible for all public examinations and national competitions, and admission to post-graduate classes of a university, but to orient the contents of the course to various professions in rural areas;

(c) to give the students an insight into village problems and to train them in their solution;

(d) to imbibe in them an understanding and sympathy for the rural way of life and an abiding interest in the welfare and uplift of the community.

With the above aims in view, the subjects of study were divided into two groups, compulsory subjects, and optional and elective subjects. The core subjects included English, Regional Languages, history of Civilisation, Rural Problems, Extension Work and Action Research. In addition, the Diploma course had two additional subjects, namely, history of Civilisation and Rural Problems. The students of Rural Institutes spent considerable time on extension work in the rural areas and undertook micro-studies of selected problems along the lines of action research. They acquired a familiarity with the working of rural institutions like Cooperative Societies and Panchayats, and also became acquainted with the rural cultural milieu.

As an increasing number of students completed the three-year Rural Services Diploma course, need arose for the establishment of post-diploma courses. The students who graduated from the Rural Institutes often faced difficulty in securing admission to post-graduate programmes in colleges or universities. Besides, the students felt that for them to switch from a Rural Service Diploma course to a conventional post-graduate course was a waste of the field and extension-oriented education. In addition to these, two other factors motivated the National Council of Rural Higher Education to establish post-diploma courses. Firstly, pressure from the Ministries of the Government of India. The Planning Commission strongly urged the Ministry of Education to start post-graduate studies in the subject of Cooperation and the Ministry of Community Development wanted post-graduate studies established in Cooperation and Panchayati Raj Administration. Secondly, there was an expectation that the number of Rural Institutes would be substantially enlarged and the programmes in the existing Institutes expanded, for which they would require special teachers. Post-graduate courses were started in selected institutions and the syllabi for the post-graduate diploma course were also designed with great care.

A mention should also be made of the other courses organised by the Rural Institutes, more or less on the lines recommended by the Committee on Rural Higher Education. Hardly any course other than the Rural Services Diploma was organised by all the Institutes, but most of them set up certificate programmes on Rural Sanitation and Rural Engineering, and a few organised programmes for teacher training and training in village industries. Although the curriculum of all rural institutes was uniform, owing to differences in the educational philosophy of different directors the actual implementation of the programme varied from institute to institute. Almost all institutes maintained and managed efficient agricultural farms and grew

good quality seeds, thereby acquainting the students with high-yielding seed technology. The Gargoti Institute paid considerable importance to rural health and family planning. The Udaipur Institute made rural sanitation an important aspect of its extension programme and the Gandhigram Rural Institute became a national training centre for Khadi and Village Industries Workers. Almost all institutes gave a very practical bias to their academic programme.

Financial support for the Rural Institutes came mainly from the Government of India. At the beginning, the financial needs were estimated at a very high level. It was anticipated that the building and campus development requirements of each institute would amount to approximately Rs. 6.8 million. However, after consultation with the different Ministries of the Government of India, the financial requirements were approved at a much lower level and on an average each institution was provided only Rs. 1.6 million for the construction of buildings, the development of the campus, and the purchase and development of farms and animal husbandry units. Recurring expenditure on salaries and other items was also slashed down from the original proposal of a little over half a million rupees per year per institution. The recurring expenditure sanctioned for the first five year period was about Rs. 0.9 million per institution, this figure being substantially reduced in the subsequent quinquennial. The Government of India provided 75% of the funds required for the Rural Institutes, the remainder was expected to be met by the State Government or by the Institutes themselves through agricultural farms or donations.

The students who joined the Rural Institutes in the first flush of enthusiasm hoped to get high government positions in the Community Development administration. Soon this enthusiasm was overtaken by practical caution, particularly because the institutes were not going to offer degrees but only diplomas. In India a degree still has, at least in the eyes of the uninformed, a much higher status than a diploma. In their meetings and conferences, the Directors of Rural Institutes reported that persons who found it difficult to be admitted to regular colleges or universities sought admission to the Institutes. In spite of this handicap, it needs to be said to the credit of the Rural Institutes that they generally maintained a satisfactory academic standard, and that a fairly large number of students were able to secure admission to post-graduate courses in universities or suitable employment in government or cooperative societies. In the first few years after the launching of this programme, the Ministry of Education maintained records in respect to the alumni of the institutes. It shows that the graduates of the institutes who joined the post-graduate course in universities were reported to have done well as compared with their counter-

parts who had taken their B.A. degrees from universities or colleges. Further, in most cases the employing agencies reported that the diploma holders of Rural Institutes were found better suited for work in rural areas.

Soon after the establishment of the Rural Institutes, the Ministry of Agriculture started encouraging the establishment of Agricultural Universities with the same three-fold functions of education, research and extension. This made the agriculture courses in the Rural Institutes somewhat redundant. Moreover, in the 1960s, the Community Development programme receded into the background and the strategy of professional unidirectional extension, emphasising mainly agriculture, was adopted by the Government of India. Moreover, the different ministries continued to set up their own training institutes for their field workers. All these factors together affected the Rural Institutes and admissions began to fall steeply towards the close of the 1960s. In 1972, in an important meeting of the National Council of Rural Higher Education, it was decided that the Rural Institutes programme, as it had existed hithertofore, should be wound up and the institutes advised to seek affiliation with the nearby universities. With a couple of exceptions, all the institutes have been able to obtain affiliation with the universities and have become a part of the university system.

## The failure and its lessons

The Rural Institutes programme started under very favourable circumstances. Independence was followed by an era of planned development. From all accounts, the First Five Year Plan (1951-56) was a great success. The Community Development programme attracted the notice of the whole country and engendered a need for a large number of workers for the rural areas. Thanks to the report of the University Education Commission and the view expressed by the leaders of the country, the need for a system of rural higher education was universally accepted. The Chairman of the Committee on Rural Higher Education, which prepared the blueprint for the establishment of the Rural Institutes, became a Minister in the Ministry of Education soon after their establishment and was at the helm of the Ministry for several years. Rural Institutes were established in specially selected non-government institutions with a record of commitment to the cause of education and social development. Similarly almost all the Directors of these Institutes were men of action and vision.

Yet the programme landed in severe difficulties within a few years of its inception. What were the reasons? And what lesson does an analysis of those reasons hold for the future?

The seeds of failure lay in the original structure envisaged by the Committee on Rural Higher Education. The National Council of Rural Higher Education, the body responsible for laying down policy, for providing supervision and guidance to individual institutions and for the conduct of examinations, was too unwieldy and too deliberative for the discharge of such diverse functions. Making the Council a part of the Ministry also led to unavoidable difficulties. There was no operational flexibility and important decisions were taken by officials who did not necessarily have the vision of rural higher education.

Apart from this close connection with the Ministry of Education the other factor which proved a problem from the beginning was the isolation of the Rural Institutes. The scheme of Rural Institutes did not establish any linkage with a system of secondary education, and depended on the conventional secondary schools. The Rural Institutes, therefore, had to admit students who were educated in institutions which prepared young people for conventional colleges and universities. Nor was there any university at the top. The institutes were, therefore, like a half-way house between rural vocational schools and rural universities. They were never admitted to the university system, nor were they genuinely recognised by the government agencies. The different Ministries of the Union Government were reluctant to coordinate their manpower needs with the Rural Institutes and continued to strengthen their training institutes which deprived the graduates of the Rural Institutes of employment opportunities. Many State Governments did not even recognise the three-year diploma awarded by the Rural Institutes as equivalent to an ordinary university degree; the State Governments which did recognise the diploma gave it step-motherly treatment. The general attitude towards diplomas vis-a-vis university degrees, the sufference shown by the universities and the reluctant recognition given by the State Governments created serious strain on the Rural Institutes and tended to engender a defensive response amongst students for being in Rural Institutes.

The challenge of rural higher education is too important for a predominantly rural and agricultural country like India to be set aside as a result of the failure of the Rural Institutes experiment. A comparison between the two Gandhian institutions, namely Gujarat Vidyapeeth and Lok Bharati, Sanosra with Rural Institutes will help in identifying the lessons. It is noteworthy that Lok Bharati was one of the Rural Institutes which was included in the 1956 scheme itself. However, Lok Bharati, as well as Gandhigram Rural Institute, Madurai, have retained their essential characteristics even after the discontinuation of the scheme. The points of strength of the Gandhigram Rural Institute and Lok Bharati are that they are at the apex of a very large number of Gandhian primary and

secondary schools; and their graduates have a natural desire to join those institutions. From school or up they are trained for work in rural areas and the institutions of higher education only strengthen and professionalise this training. The other Rural Institutes stood aloof and had to deal with young people who had received conventional secondary education which had no rural bias and gave no importance to manual work. Secondly, for rural education to be relevant to the rural area, the curriculum, organisation of the programme time, hostel life, etc. have to be arranged to suit those needs. By centralising curriculum design and examinations, the Rural Institutes scheme went fundamentally against the essential prerequisites for the success of the Rural Institutes programme. In contrast, the University Education Commission had recommended a cluster of small colleges attached to a university. It could be practicable for such a cluster to develop a curricular programme appropriate for the needs of that region; it was hardly possible for the Central Government to do so. The third important lesson is that rural higher education must become an integral part of the overall strategy of rural development. Splitting the effort for rural development between Ministries, between the Union and State Governments, between Government and voluntary agencies is not the best way of going about it. An effective system of rural higher education is possible only by organising a genuinely integrated rural development programme, to which the interests of the Ministries and of individual agencies must be subordinated.

## D. THE POLICY OF EDUCATIONAL EQUALITY

The Education Commission (1964-66) devoted a full chapter to the equalisation of educational opportunity. It said:

> One of the important social objectives of education is to equalize opportunity, enabling the backward or under-privileged classes and individuals to use education as a lever for the improvement of their education. Every society that values social justice and is anxious to improve the lot of the common man and cultivate all available talent, must ensure progressive equality of opportunity to all sections of the population.[1]

The Commission was recapitulating a sentiment which had been expressed with passion and effect by several social reformers and leaders in India, most forcefully by Gandhi in his persistent plea for ameliorating the condition of the "untouchables", whom he called the harijans. This reformist motivation found its culmination in the Indian Constitution, which provides for protective discrimination in favour of the weaker sections of society.

### Defining weaker sections

(a) The Scheduled Castes and Scheduled Tribes (SC/ST). One of the Directive Principles of State Policy included in the Constitution states that

> the State shall promote with special care the educational and economic interests of the weaker sections of the people and, in particular, of the Scheduled Castes and Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.[2]

Further the Constitution provides for the promulgation of Schedules of Lists containing the castes and tribes which are particularly backward. The castes and tribes which are listed in the Schedules prepared under this directive of the Constitution are known as Scheduled Castes and Scheduled Tribes. In India when a reference is made to these castes and tribes, it is universally understood that the groups indicated are economically, socially and culturally the weaker sections of society. Between them they comprise approximately one-fifth of India's total population.

The main characteristics of the persons belonging to SC/ST is poverty. It is estimated that these groups are among the poorest in India, and generally not able to earn enough even for a subsistence

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1 Education and National Development op. cit. p.198

2 The Constitution of India, Chapter IV, Article 48.

living. They are also educationally the most backward. The percentage of literates amongst SC/ST was 10.27% and 8.54% respectively in 1961, while the percentage of literates for the population as a whole was 24%. These figures rose in 1971 to 14.71%, 11.29% and 29.35% respectively. The available enrolment figures at universities and colleges are given in the table below:

Table II.2

Enrolment of SC/ST in institutions of higher education in India

| Year | Total Enrolment | SC | ST |
|---|---|---|---|
| 1964-65 | 950,277 | 77,748 | 16,500 |
| 1969-70 | 1,792,780 | 182,770 | 36,005 |

(b) The rural population. In addition to SC/ST, rural people are considered as part of the disadvantaged sections of society. The greatest disadvantage of persons living in rural areas is the system of education itself, which is urban-oriented and tends to draw talented young people from rural to urban areas. Higher education has had a very limited effect on the development of rural areas. The educational backwardness of the rural areas, of course, stems from the low rate of literacy and lack of acceptance, as it were, by the rural people of the system of elementary education. Although educational facilities, including those of higher education, have expanded over the years in the rural areas, the benefits have gone mainly to the financially stronger sections of rural society, and the small farmers and the landless agricultural workers continue to be out of the system.

(c) Women. Women's education has also lagged behind in India, and although all institutions of higher education are open to men and women, enrolments are low, particularly in professional and scientific courses, as is evident from the following table: [1]

Table II.3

Enrolment (Faculty-wise) of women in university education

| | 1950-51 | 1960-61 | 1970-71 |
|---|---|---|---|
| Arts | 29,262 (16.1) | 1,19,687 (24.6) | 4,21,850 (31.7) |
| Science | 9,046 ( 7.1) | 31,696 (10.5) | 1,68,540 (17.8) |
| Commerce | 189 ( 0.6) | 831 ( 0.9) | 12,675 ( 3.7) |
| Education | 1,339 (32.4) | 6,240 (32.8) | 20,799 (36.5) |
| Engineering/ Technology | 19 ( 0.16) | 403 ( 0.89) | 910 ( 1.0) |
| Medicine | 2,493 (16.3) | 7,714 (21.9) | 22,296 (22.8) |
| Agriculture | 8 ( 0.17) | 124 (0.45) | 169 ( 0.4) |

1 Unpublished figures, supplied by the University Grants Commission.

| | | | |
|---|---|---|---|
| Veterinary Science | 5 (0.45) | 38 (0.71) | 44 ( 0.7) |
| Law | 290 ( 2.1) | 815 ( 3.0) | 2,626 ( 3.7) |
| Others | 475 (18.8) | 2,917 (26.8) | 5,913 (40.0) |
| All faculties | 43,126 (10.9) | 1,70,455 (16.2) | 6,55,822 (21.9) |

Note: Figures in parentheses indicate the number of women per 100 men students and the figures include the intermediate college enrolment of Utter Pradesh.

The reasons for low enrolments have been examined recently by the Committee on the Status of Women in India, which submitted its Report, 'Towards Equality', in 1975. It came to the conclusion that the attitude of parents and society has kept enrolments low and that in many ways, mostly covert, there is also discrimination against women. Emphasis on coeducation and a clearer identity of purpose were recommended. As stated by the Secretary of the Committee in one of her recent writings, "the more we emphasize idle dependence as the normal life for women, the more we help to encourage a pattern of values that contradicts the goals of our nation. Responsibility is the concomitant of equality and being educated involves some social obligations."[1]

These three weaker sections of society, namely persons belonging to SC/ST, people living in rural areas and women, overlap to a large extent. Thus persons belonging to SC/ST live in rural areas, and both groups obviously include women. The measures taken by the Government of India and the State Governments serve all three sections and have been divided into two broad categories, viz. (i) the extension of educational facilities to the weaker and disadvantaged sections of society; and (ii) the provision of financial incentives to enable them to use the facilities provided.

Extension of facilities

A large percentage of persons belonging to the Scheduled Castes and almost the entire Scheduled Tribes population reside in the rural areas. Even if facilities for higher education in urban areas are somewhat limited, persons belonging to SC/ST are not likely to find difficulty in securing admission. The problem of expanding institutional facilities, therefore, mainly relates to rural areas as a whole.

Numerical expansion

The expansion of facilities in rural areas raises a serious dilemma. The two important aspects of educational planning at the higher education level are the growth of existing colleges to a level of viability, and the regulation of enrolment. The viability of a college depends mainly on its size; it is only when the student body

1 Vina Mazumdar, "Higher Education of Women in India", Journal of Higher Education, Volume 1, N° 2 1975.

is sufficiently large that provision can be made for teaching a large number of subjects and an inter-disciplinary approach towards the study of different subjects can develop. That would also make it possible for teachers to specialise. Laboratory, library and sports facilities in colleges can be fully utilised and per capita costs kept at a reasonable level only if colleges are of reasonable size. Besides, the policy of regulating enrolment at the higher education stage also requires that colleges are not established indiscriminately. On the other hand, there is a strong movement favouring equality of opportunity. In spite of this dilemma, local pressures from the rural areas has resulted in the opening of several colleges in the backward and rural areas and in 1972-73 the number of colleges in rural areas stood at 904 out of a total of 3,929 colleges.

Non-traditional instruction. Towards the close of the 1950s there was a widespread move for the establishment of non-formal programmes of higher education. Several evening colleges were set up and opportunities for taking university examinations without attending full-time university courses were provided by several universities. Beginning with the University of Delhi in early 1960s, correspondence courses were started by several universities towards the end of 1960s. During the first 5 years of the current decade, these facilities have grown tremendously and working men and women, housewives and persons living in rural areas are availing themselves of these facilities. These non-formal programmes of higher education, even though most of them only repeat the courses which are available to regular full-time students, represent a substantial contribution to the widening of educational opportunities.

Reservation of seats. In the admission of persons belonging to SC/ST, universities and other higher education institutions generally give special concessions. [1] In almost all Central Universities 10 to 15% of seats are reserved for persons belonging to Scheduled Castes and 5% for persons belonging to Scheduled Tribes. Similar provisions exist in other prestigious institutions like the Indian Institutes of Technology, Agricultural Universities, etc., and in most State Universities as well, though the levels may vary. As admission to most institutions of higher education is based on merit, in some institutions separate eligibility criteria have been laid down and grading lists are prepared separately for candidates belonging to these categories. In other institutions students from disadvantaged groups are given a special dispensation of a few percentage points in marks obtained either in the admission test or in the higher secondary examination so that they may be competitive with other categories of students. For example, if the lowest percentage of marks conferring eligibility for admission is 60 for the general category of students, it would be say 55 for those belonging to SC/ST.

Equality of success. An important development in recent years has been the realisation that it is not sufficient to provide for equality of access to higher education because most of the persons

1 Special Educational Facilities, Concessions, Scholarships and other aids to Scheduled Castes and Scheduled Tribes students in educational institutions administered by the Centre, Ministry of Education and Social Welfare, Government of India, New Delhi, 1975.

belonging to groups such as SC/ST come from backgrounds which put them at a disadvantage from the very beginning. Besides they are generally able to secure admission only in institutions of inferior quality. The Central Government has, therefore, taken a firm decision to ensure "equality of success" as well as "equality of access". With this in view efforts are being made to reserve seats for persons belonging to SC/ST in institutions of good quality. Arrangements are also being made to organise special tutoring for these students so that they can keep pace and compete with other students. This arrangement has successfully been tried in the Indian Institutes of Technology.

Higher education facilities for women have expanded in many ways including: firstly, through the expansion of higher education facilities in general, accessibility for women has naturally increased; secondly, the number of women's colleges, has increased substantially from 81 in 1953-54 to 435 in 1971-72; [1] and thirdly, by the establishment, in 1960, of the SNDT Women's University at Bombay. The objective behind the establishment of this university was to provide a three-year education programme in the regional language leading to a degree. Although the university is exclusively for women and gives importance to subjects which are traditionally regarded as of special interest to women, e.g. Home Science, its emphasis is on the adjustment of the duration of the course and its content to suit the requirements of the pupils. The university has made considerable contribution to women's education in the western region.

Financial incentives

The cost of pursuing higher education for students in India is very low by western standards, but is quite substantial with reference to the income structure of the common man in India. Apart from university and college fees, the expenditure on books and stationery is heavy. As persons belonging to SC/ST come from the economically weakest sections of society the expenditure on higher education is often beyond their means. Special arrangements have, therefore, been made to ensure that persons belonging to these sections are not discouraged from pursuing higher studies merely because of financial constraints.

The most important measure consists of post-matriculation scholarships. This scheme was started only for persons belonging to Scheduled Castes in 1944-45 with a nominal figure of 140 awards. In 1948-49 it was extended to persons belonging to Scheduled Tribes. The unique feature of this scheme as it functions today is that all eligible SC/ST students are awarded scholarships and their number is not pre-determined or limited by the availability of funds. Only those students who come from families with monthly income exceeding Rs. 750/- per month are excluded. In the last few years the amount of the scholarship has increased by 50% and the disbursement procedure has been rationalised. The scholarships range from Rs. 40 per month for a person pursuing studies as a day scholar to Rs. 125 per month for one who resides in a hostel. Girl students are given an additional sum of Rs. 10 to 15 per month as a special incentive. This

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1 Towards Equality, Report of the Committee on the Status of Women in India, Government of India, 1975.

scholarship scheme has significantly contributed to the expansion of higher education among persons belonging to SC/ST as is evident from the following table: [1]

Table II.4

Post-Matriculation scholarships awarded to SC/ST students

| Period (Five Year Plan) | Scheduled Castes | Scheduled Tribes | Total |
|---|---|---|---|
| | Awards | Awards | |
| Before First Plan | 4,430 | 618 | 5,048 |
| First Plan | 37,077 | 8,494 | 45,571 |
| Second Plan | 1,61,470 | 25,586 | 1,87,056 |
| Third Plan | 3,18,964 | 60,058 | 3,79,022 |
| Fourth Plan | 9,94,717 | 1,72,299 | 11,67,016 |

Mention should also be made of National Scholarships awarded to students who satisfy the merit-cum-need criteria laid down for this purpose. The present means criteria excludes persons whose family income is more than Rs. 500 per month. However, the means criteria is not applicable for scholarships for post-graduate studies. Funds are normally available for about 12,000 scholarships; for 1976-77, however, there is a proposal to increase the number of awards to 17,000.

Another scheme under which a reasonable proportion of funds is also earmarked for persons belonging to SC/ST, is the National Loan Scholarship Scheme. This too is for students of merit who cannot afford to pursue further studies. Under this scholarship needy students of high merit are given a liberal sum each month in the form of interest-free loan to complete their studies, and they are expected to repay the loan in instalments after their monthly income reaches a prescribed level. According to the Annual Report of the Ministry of Education, 1975-76, about 20,000 scholarships of this type were granted in that year.

In addition to the scholarships available to SC/ST students, some other important facilities are also generally provided in universities and colleges.

Freeships. Most universities and colleges do not charge any tuition fee from SC/ST students. This is a substantial relief because fees generally vary from about Rs. 10 to Rs. 25 per month.

Book Banks. Another comparatively recent programme is known as Book Banks. This is one of the schemes to which the Prime Minister has attracted attention as a measure to facilitate the education of the weaker sections of the community. In spite of efforts

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1 Based on information supplied by the Commissioner for Scheduled Castes and Scheduled Tribes, Government of India.

made by the government and publishers, the cost of books has increased enormously and many of the students feel handicapped owing to their inability to purchase books. The Book Banks scheme envisages that the college will buy multiple copies of text books and other important reference books. These would be lent on a long term basis to students who would be required to return them after conclusion of the course to which they relate. Students are also being encouraged to donate the books which they do not require. Approximately, 50% of the colleges in the country have established Book Banks and about 10% of enrolled students are benefitting from this scheme. In the coming years this scheme is likely to be further enlarged.

Study Centres. Another interesting scheme launched by UGC is the establishment of Study Centres. Under this scheme, with assistance from the UGC, universities set up centres for students coming from homes where satisfactory facilities for study are not available. These centres are like large reading rooms and are expected to have adequate stocks of text books and other books likely to be needed by students. It is hoped that these Centres will also be used in due course by persons enrolled in correspondence courses.

Summing up.

The unquestioned desirability of extending educational facilities to the economically and educationally weaker sections of the community is fully recognised in India and is given effect in a well planned manner. True, most of the programmes have shortcomings. For example, in spite of the increase in the amount of scholarships, these seldom provide enough for a student not to have to ask his parents for some financial assistance, and the financial condition of a large percentage of SC/ST families is such that even a small contribution is often beyond their means. Secondly, the procedures are dilatory and it is not uncommon for students to have to wait for months after the beginning of the academic session before the first instalment is released, albeit with retrospective effect. This obliges the students to depend on their parents and ultimately this becomes a disincentive for SC/ST members wishing to join universities and colleges. Thirdly, the condition of the hostels is generally not conducive to sustained academic work and healthy living. And finally, although a beginning has been made in the direction of remedial teaching, the SC/ST students begin and end with a basic disadvantage and their performance at the final examinations is seldom as good as that of the other students. Similarly, Government's desire to reserve seats for these categories of students in quality institutions also remains only partly implemented.

On the other hand, due to the expansion of educational facilities and to the increased financial support provided to SC/ST, as well as other students coming from the weaker sections of society, their numbers have increased enormously. In India there is a reservation of about 20% for persons belonging to SC/ST in all government and semi-government employment. Through the spread of education among SC/ST, the number of such persons employed by governmental and semi-governmental as well as non-government agencies has rapidly increased.

The extension of education to the weaker sections is inevitably taking the country in the direction of equalising educational opportunity. What is needed now is to make a two-pronged effort to further strengthen this development. On the one hand, the spread of education at the levels below the university stage, that is, at the elementary and the secondary stages, must be consolidated with a view to securing the participation of all children in the elementary education programme and improving of standards at the elementary and secondary stages. This would make eligible for admission at the university stage a larger number of more qualified students belonging to the weaker sections of the society. The second aspect is the provision of facilities in quality institutions as well as well-planned remedial programmes.

## E. CORRESPONDENCE COURSES

### The background and the need

Extension of educational facilities to those who have traditionally been deprived of them has been the policy of the Government of India since independence. As we have seen in the preceding section, this was attempted by the establishment of colleges in small towns and rural areas and by providing financial support to the educationally and culturally weaker sections of society. The population increase, the expansion of education at the school level and the financial incentives given to the weaker sections have together created a situation where the number of students in institutions of higher education is increasing at such a rapid pace that it is impossible for the expansion of institutional facilities to keep pace. The following table shows in detail the increase in university enrolments.

Table II.5

Growth of university enrolment 1950-51 to 1959-60

| Year | Enrolment | Increase over the preceding year | Percentage increase |
|---|---|---|---|
| 1950-51 | 396,745 | - | - |
| 1951-52 | 459,024 | 62,279 | 15.7 |
| 1952-53 | 512,853 | 53,829 | 11.7 |
| 1953-54 | 580,218 | 67,365 | 13.1 |
| 1954-55 | 651,479 | 71,261 | 12.3 |
| 1955-56 | 712,697 | 61,218 | 9.4 |
| 1956-57 | 769,468 | 66,771 | 8.0 |
| 1957-58 | 827,341 | 57,853 | 7.5 |
| 1958-59 | 928,622 | 101,281 | 12.2 |
| 1959-60 | 997,137 | 68,515 | 7.4 |

The policy of the Government of India is to regulate the expansion of institutional education without denying access to higher education to persons who have traditionally been deprived of it. Another factor with contributed to the decision to establish correspondence courses was the prior complete separation of the world of work from the world of education. Since all higher education was institutional and full-time, persons who entered employment but also wanted to continue their education had no means of doing so. It was observed that this placed the economically weaker sections of society in a position of further disadvantage. Correspondence education, with its new approach to teaching and learning, offered a way to meet the demand for planned instruction particularly from the disadvantaged sections of society, without a corresponding expansion of university facilities.

The scheme of correspondence courses was included in the Third Five Year Plan and an Expert Committee was appointed in March 1961 under the Chairmanship of D.S. Kothari, then Chairman of the University Grants Commission, to work out the details. The Committee after prolonged deliberations felt that the correspondence method admitted of greater flexibility than class-room education, particularly in the combination of subjects leading to a degree, and that this was an advantage which should be fully exploited in the interests of sound education. The

Committee was impressed by the need to secure flexibility in the application of the system to varying conditions in the country and felt that correspondence courses would help in expanding and equalising educational opportunities. The Committee allayed the fears of those who were sceptical about the soundness of this unconventional method of instruction by categorically stating that if the scheme of correspondence courses was "consistently operated by exacting and skilled teachers and educational administrators, standards need not and will not suffer".

The Committee during its deliberations suggested that the University of Delhi might launch the scheme of correspondence courses as a Pilot Project. The university agreed to the proposal and established, in 1962, a School of Correspondence Courses and Continuing Education. The response to the B.A. correspondence course offered by the school was very encouraging. Starting with 1,112 students for the B.A. Part I Course in the very first year (1962), the number rose to 7,181 in 1966 for all three classes of the B.A. course. The school added a correspondence course leading to the B.Com. degree in 1970.

The Education Commission (1964-66)[1] examined the different aspects of the problem created by increasing enrolment without a proportionate expansion of facilities and also the need to enable the educationally and culturally deprived sections of society to have access to higher education of satisfactory quality and arrived at the following conclusions :

> The opportunities for part-time education through programmes like evening colleges and for own-time education through programmes like Correspondence Courses should be extended as widely as possible and should also include courses in science and technology. They will help to reduce the capital costs of expanding higher education and cut down even the recurring costs to substantial extent, especially as enrolments grow. They are the only means to provide higher education to those who desire to study further but are compelled on economic grounds, to take up employment at the end of the school stage. There need be no fear that they will lead to a deterioration of standards, especially if due care is taken to maintain personal contacts with the students receiving correspondence education by organising academic programmes during vacation and holidays. In fact, it would be correct to say that, by and large, the standards in such courses tend to be better because of the intensive motivation of the students. We suggest that by 1986 at least a third of the total enrolment in higher education could with advantage be provided through a system of correspondence courses and evening colleges. We also suggest that the UGC should establish a Standing Committee on part-time education.

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(1) For Education Commission, see Part I.

The courses and the students

In the light of these recommendations of the Education Commission, and of the success of the Pilot Project started by the University of Delhi, the University Grants Commission appointed a committee in 1967 to consider the possibility of extending correspondence courses to other universities. This committee suggested the following guidelines for the extension of correspondence courses .

(a) Correspondence courses should be started only in well-established universities with strong faculties.

(b) Duplication of courses for the same degree should be avoided unless there are compelling reasons to do so.

(c) Universities providing correspondence courses should have centres in different places for contact classes. Colleges should be used as contact points and their laboratory and library facilities used as far as possible.

(d) Universities providing correspondence courses should have special library facilities for these courses such as multiple copies of text books and specially prepared books for correspondence courses. In addition, there should be a good collection of correspondence lessons prepared in other countries.

(e) It would be desirable to organise a workshop on methodology for the preparation of instructional material.

(f) The duration of the degree through correspondence should be the same as for the normal course.

(g) It would be desirable that only a selected number of universities undertake to initiate these courses in the first instance.

In keeping with the recommendations of the Education Commission and the UGC Committee appointed in 1967, the UGC decided to extend the scheme of correspondence courses to other universities. Punjabi University, in Patiala was the second university in the country which was allowed to set up a full-fledged Directorate of Correspondence Courses, in 1968.

The success achieved by the University of Delhi and the Punjabi University prompted a number of other universities to start correspondence courses. These universities are Mysore, Madurai, Meerut, Rajasthan, Himachal, Panjab, Bombay, Venkateswara, Andhra and Utkal. Besides, Regional Colleges of Education at Ajmer, Bhopal, Bhubaneswar and Mysore also offer correspondence courses for the degree of Bachelor of Education. The Central Institute of English and Foreign Languages offers a Post-graduate Certificate course in the Teaching of English. Two of the Agricultural Universities,[1] the

(1) For Agricultural Universities, see Part II, Sections II and IV.

Punjab Agricultural University, Ludhiana and Pant Nagar Agricultural University have also entered the field to offer correspondence courses for farmers.

Most of these universities and institutes offer traditional university courses through correspondence leading to Bachelor's degrees in Arts and Commerce. But the Punjabi, Rajasthan, Himachal and Mysore Universities have also started postgraduate (Master's) courses in selected subjects. The Punjabi University, Patiala has given a lead in starting a number of job-oriented courses such as Labour Laws, Personnel Management, Contracts Management, Purchasing and Stock Control, Elements of Costing, etc. The University of Bombay has also moved towards broadbasing correspondence courses by instituting M.Com. and M.A. External Degree Courses, a Diploma in Higher Education, and a Certificate course in operations Research for Management. The Directorate also assists the Shipping Corporation of India in writing lessons for the mates on their ships to help them prepare for their examinations in Physics and Mathematics. The Punjab Agricultural University, Ludhiana has started some very useful correspondence courses to impart free instruction to farmers in agricultural technology. These courses are becoming popular. As a follow-up measure, the university is establishing farmers' clubs for those who have been trained by the correspondence courses scheme.

Details of courses offered by various universities and their enrolment are given in the following table.

Table II.6

Courses offered and students enrolled 1975-76

| University/Institution | Courses | No.of students enrolled |
|---|---|---|
| 1. University of Delhi | B.A. | 7,048 |
| | B.Com. | 6,674 |
| 2. Directorate of Correspondence Courses, Punjabi University, Patiala | Prep. | 660 |
| | B.A. | 1,446 |
| | Gyani | 234 |
| | Punjabi Praveshika | 62 |
| | M.A. | 354 |
| | Diploma in Library Science | 339 |
| | Business Management | 965 |
| 3. Himachal University, Simla | B.A. | 816 |
| | M.A. | 4,703 |
| | P.U. | 459 |
| 4. Mysore University, Mysore | P.U. | 2,544 |
| | B.Com. | 239 |
| | Diploma/Certificate | 261 |
| | B.A. | 3,220 |
| | M.A. | 943 |

| | | | |
|---|---|---|---|
| 5. | Meerut University | B.A. | 1,095 |
| 6. | Madurai University | P.U.C. | 6,175 |
| | | B.A. | 5,784 |
| | | B.Com. | 6.175 |
| 7. | Panjab University, Chandigarh | Prep. | 1,686 |
| | | B.A. | 7,447 |
| | | B.Com. | 595 |
| | | Diploma Course in Office Organisation | 104 |
| 8. | University of Rajasthan, Jaipur | M.A. | 3,757 |
| | | B.Com. | 950 |
| 9. | Bombay University | F.Y. Arts | 449 |
| | | Inter Arts | 419 |
| | | B.A. | 636 |
| | | F.Y. Commerce | 401 |
| | | Inter Commerce | 242 |
| | | B.Com. | 383 |
| | | M.Sc. | 81 |
| 10. | Sri Venkateswara University, Tirupati | B.A. | 237 |
| | | B.Com. | 458 |
| 11. | Andhra University, Waltair | B.A. | 734 |
| | | B.Com. | 898 |
| | | P.U. | 516 |
| 12. | Utkal University, Bhubaneswar | B.A. | 781 |
| | | Intermediate Arts | 813 |
| 13. | Regional Colleges of Education, | | |
| | Ajmer | B.Ed. | 435 |
| | Bhopal | B.Ed. | 253 |
| | Bhubaneswar | B.Ed. | 250 |
| | Mysore | B.Ed. | 250 |
| 14. | Panjab Agricultural University, Ludhiana | - | 503 |

To ensure that the academic level of the correspondence course students is the same as that of the regular college/university students, the syllabi and courses of study as also the examination papers are the same for both groups, though they vary from university to university.

In the beginning a majority of correspondence course students in most of the universities were in-service persons but now that a considerable back-log of such aspirants has been cleared, the percentage of in-service students is tending to decrease. Details of the differential between the employed-notemployed, male-female, married-single and urban-rural in respect of some universities is given in the following table :

Table II.7

Table II.7

Percentage of correspondence courses students in India

| University | Employed | Not-employed | Male | Female | Married | Single | Urban | Rural |
|---|---|---|---|---|---|---|---|---|
| Delhi | - | - | 73 | 26 | - | - | - | - |
| Punjabi | 48 | 52 | 78 | 22 | 25 | 75 | 55 | 45 |
| Himachal | 51 | 49 | 85 | 15 | - | - | - | - |
| Bombay | 70 | 30 | 66 | 35 | 60 | 40 | 95 | 5 |
| Panjab | 46 | 54 | 94 | 6 | 33 | 67 | 61 | 39 |
| Andhra | 39 | 61 | 73 | 27 | 38 | 62 | 78 | 22 |
| Utkal | 30 | 70 | 87 | 13 | - | - | - | - |
| Regional College of Education, Ajmer | 100 | - | 82 | 18 | - | - | Mostly urban | |
| Regional College of Education, Bhopal | 100 | - | 75 | 25 | - | - | Mostly urban | |

A majority of students belong to the 16-21 and 22-25 age groups as is evident from the following table based on the latest figures received from the universities listed :

Table II.8

Percentage of correspondence courses students in different age groups

| University | 16-21 | 22-25 | 26-30 | 31-35 | 36-40 | 41+ |
|---|---|---|---|---|---|---|
| Punjabi University, Patiala | 37.43 | 40 | 12.80 | 6.43 | 2.05 | 1.29 |
| Utkal University, Bhubaneswar | 63 | 22 | 7 | 4 | 2 | 1 |
| Andhra University, Waltai | 35 | 23 | 18 | 14 | 9 | 1 |

In order to ensure that correspondence courses provide quality education and maintain satisfactory academic standards the UGC has constituted a Standing Committee for Part-time and Own-time Education. This Committee undertakes periodic reviews of problems of correspondence courses. It has suggested detailed guidelines for correspondence courses at the undergraduated as well as the postgraduate level. The committee view correspondence education as an alternative method of education to enable a large number of persons with the necessary aptitude to acquire further knowledge and improve their professional competence. As spelt out in the guidelines, correspondence courses are intended to cater for

(a) students who had to discontinue their formal education owing to pecuniary and other circumstances;

(b) stutends in geographically remote areas;

(c) students who had to discontinue education because of lack of aptitude and motivation but who may later on become motivated;

(d) students who cannot find a seat or do not wish to join a regular college or university department, although they have the necessary qualifications to pursue higher education; and

(e) individuals who look upon education as a life-time activity and may either like to refresh their knowledge in an existing discipline or to acquire knowledge in a new area.

The guidelines are comprehensive and include advice on :

- the preparation and supplementation of instructional material;
- the appointment of essential staff;
- reform of the examination system and the adoption of a continuous assessment system of examination by units;
- the desirability of an interchange of teaching staff between the university teaching departments and the correspondence courses institutes;
- periodical reviews of the working and progress of correspondence courses;
- the extension of correspondence courses to new subjects.

The pattern of imparting instruction

The pattern of imparting instruction through correspondence courses is more or less the same in all the universities though some universities have not yet given emphasis to some aspects while others have.

The course material, or the lessons, are crucial to the success of correspondence programmes. In most cases, these are written by experienced teachers drawn from different universities and colleges on payment of suitable remuneration. However, the rate of remuneration varies from institution to institution. Every institute is supposed to have an Expert Committee for each subject of study. The Committee consists of the Director/Chairman and one senior member of the Board of Studies in the subject concerned, two senior lecturers from colleges affiliated with the university and the teacher in charge of the subject concerned at the correspondence courses institute. The Committee appoints a panel of lesson writers on the basis of qualifications and the experience and reputation of teachers. The number of lessons and break-down of topics for each lesson is also discussed and decided by the Expert Committee. The Director, in consultation with the teacher in charge of the subject assigns lesson writing work to the teachers on the panel. Broad instructions regarding the style and format of lessons, as well as detailed

instructions for the topics to be covered, are sent to the lesson-writer with the assignment letter. These lessons when received from the lesson writer are thoroughly scrutinised and vetted by the teacher in charge of the subject and his colleagues to give them proper shape and to make necessary additions, changes etc. where necessary. The lessons are then sent to the press or cyclostyled. The copyright of the lessons rests with the university. Some universities revise their lessons every year in the light of students' feed-back and to ensure that the content of the lessons is updated. Occasionally, some lessons are reviewed by outside experts and if necessary revised or re-written completely. In case of changes in the syllabus, the lessons also have to be rewritten.

At the postgraduate level, Punjabi University supplements the instruction contained in the lessons, with a package of reference material sent to the students which includes extracts from various books, journals etc. and suggestions regarding relevant reading material.

Each lesson or unit of lessons comprises a few examination-type questions which the student is required to answer and return for evaluation. Some universities also provide study notes, a glossary of new terms, where necessary, and self-check objective type questions to enable the students to test their comprehension. A key to the answers is also provided.

The lessons are generally sent to the students in regular despatches, about once a month, in order to sustain their interest and encourage regular study habits. In order to ensure regular feed-back from the students and to assess the progress made, every student is required to submit his responses to the questions given in each lesson. In accordance with the guidelines laid down by the UGC, a student is required to return 20 response sheets, suitably distributed among the different subjects of study, during each academic year. Although some universities have made the submission of response sheets compulsory, only about 20-50% and 50-70% students submit them at undergraduate and postgraduate levels respectively. No university has, however, so far taken action against students who fail to submit the required number of response sheets. It has also been observed that some student even though they do not submit any response sheets, do very well at the university examinations.

The response sheets are carefully corrected and evaluated by the teachers and sent back to the students with detailed comments and suggestions for improvement by the subject teacher. A proper record of marks awarded by the teacher is maintained in a register so as to keep track of the students' progress. These tests, coupled with the response sheets, give the correspondence course students good practice in tackling questions and help them prepare for the final university examinations. The regular submission of response sheets also establishes a rapport between the teachers and students.

The well-planned and carefully prepared course material and the regular evaluation of answers written by the students throughout the academic session constitute two major advantages

that correspondence course students have over regular students in colleges and universities who do not get such well prepared course material and have very little practice in writing assignments.

Again, in conformity with the recommendations of various committees of experts and with the guidelines laid down by the UGC, most of the correspondence courses institutes organise personal contact programmes for their students to supplement instruction through printed lessons. These programmes provide an opportunity for students to meet and communicate with their teachers. In these personal contact programmes, apart from the intensive class-room teaching the students get a chance to sort out their individual difficulties and problems. Some of the universities also organise these programmes at a number of places outside the campus, depending upon the number of students in different areas. The percentage of undergraduate students who attend these personal contact programmes varies from 30 to 50.

The common reasons due to which such a large percentage of students are unable to attend these programmes are (a) difficulty in getting leave from their employer; (b) difficulty in getting rail/bus travel concessions; (c) family commitments; (d) financial hardship; and (e) non-availability of board and lodging facilities. However, the reaction of the students who are able to attend the personal contact programmes is generally very favourable and they go back with added confidence and enthusiasm to pursue their studies.

At the post-graduate level it is compulsory for the students to attend one orientation programme and two personal contact programmes during each academic year, but here too not all students are able to attend all these programmes.

Radio talks constitute another important aspect of correspondence education. These talks can go a long way in supplementing and reinforcing the instruction imparted through the lessons. But the all India Radio[1] (AIR) has not been able to provide adequate radio coverage to the institutes of correspondence courses. Only three universities, viz., Delhi, Punjabi and Panjab, have been able to provide some radio talks to their correspondence course students. Apart from the need for greater radio support to the programmes, efforts need to be made to provide necessary training to teachers in writing interesting and meaningful radio scripts. The Directorate of Correspondence Courses, Punjabi University, Patiala, has taken the initiative in this direction by organising two seminars on the writing of good radio scripts, with the help of the Director, Staff Training, AIR, Delhi and the Director, AIR, Jullundur.

Except for the limited radio support mentioned above and the occasional utilisation of tape recorders, the correspondence courses institutes make little use of audio-visual aids or mass communication media to reinforce and supplement instruction imparted through the

(1) AIR is a Central Government organisation with branch stations in all large towns, as well as several small towns, in different parts of India.

printed lessons and personal contact programmes.

Assessment and future prospects

Correspondence education as it has developed in India so far, although fairly well organised, is more or less confined to the traditional pattern of the university system. As a result of this the institutes of correspondence courses have not been able to tap the advantages and potentialities of the system of correspondence education to the extent to which a number of other countries have done.

Although the Pilot Project at Delhi was started about 14 years ago, most of the institutes of correspondence courses in India are just 3-8 years old. The programme of correspondence courses in this country is, therefore, still in its formative stage. It is, however, possible to make a preliminary assessment of the gains and limitations of the programme and to indicate directions for future development.

It goes without saying that the persons who join a correspondence course are highly motivated. For this reason, whatever the limitations of the manner in which the programme is being implemented, the correspondence course students do comparatively well at public examinations. The desire to improve qualifications, or just to continue learning, has been thwarted in the past by the rigid rules and regulations of universities. These rules and regulations barred persons from taking university examinations unless they had attended full-time university courses. The correspondence courses enable thousands of such highly motivated persons to take university examinations and to continue their education. In a real sense, the correspondence courses programme is a "second chance" system in the Indian context.

The establishment of correspondence courses in an increasingly larger number of universities is having a significant impact on the entire university system. In the past few years the Union and State Governments have been regulating entry to higher education, taking care, however, to ensure that the economically, socially and educationally deprived sections of the community are not deprived of opportunities to study. This has been possible mainly because alternate avenues for pursuing education are now available to young people. Several young persons, who can find a job before beginning university education, take up employment because they know that they will nonetheless be able to continue their higher education. The rate of increase in enrolment in institutions of higher education, which had reached about 14% in 1967-68, dropped to 3.5% in 1974-75, and it is expected that it will be stabilised at about this level in future years. Although the reasons for this decline in the rate of increase have not been scientifically analysed, it is believed that the expansion of correspondence education has had a substantial impact. Since per capita costs in correspondence courses (estimated at Rs. 203 in the University of Delhi and Rs. 171 in the Punjabi University, as against Rs. 800 for regular students at the University of Delhi and approximately Rs. 250 for regular students at colleges affiliated

with to the Punjabi University) are much lower, and investment in higher education continues to grow, larger per capita funds are now available for grants to universities. The establishment of correspondence education programmes can, therefore, be expected to have an indirect impact on overall standards of university education.

The expectation that the correspondence programmes would provide challenging opportunities for the continuing education of the workforce has so far not been fulfilled. The types of courses offered by most of the universities are those leading to Bachelor's degrees, mainly in the Humanities and Social Sciences. The number of university graduates has, therefore, substantially increased and a fair number of them are young persons seeking employment. The employers have not yet come to recognise correspondence courses as equivalent to a good university degree, with the result that the persons who complete such courses face discrimination in comparison with institutionally qualified persons. In the understanding of most Indian employers a correspondence course graduate is indistinguishable from a degree holder who has taken the examination privately.

If correspondence courses are to cease to be a system by which persons not otherwise qualified to appear at a university examination are enabled to do so, and to acquire credibility with different types of employers, the UGC and university administrations will have to pay special attention to a number of issues.

Firstly, the type of courses to be organised must meet the needs of learners as well as conform to national requirements. Although it may not be feasible at this stage to make a major departure in different universities regarding the duration of the course and the nature of certification, the number of specialised courses should be substantially increased, e.g. Business Administration, Agricultural Economics, Teacher Training, Engineering, Health and Hygiene, Home Science and Journalism. It is also important that capability of a very high order be developed by a university in respect of the courses it is to organise. This is possible only if the UGC rigorously discharges its role, vis-a-vis the correspondence education system, of coordinating and maintaining standards. It would naturally not be practicable, for a country of the size of India to have one university organising courses in one area or subject for the entire country. However, duplication of the same courses within a small region is wasteful and needs to be avoided. It is of the utmost importance in planning correspondence education that economies of scale be kept in view.

The second issue relates to the tangled question of the teaching Staff and the supporting personnel for correspondence courses. Although it may not be desirable to completely isolate correspondence courses from the regular teaching Staff in universities, there is a definite need for a core teaching Staff which would pay continuing attention to modifications in courses, the quality of instructional materials, the examination of response sheets, the evaluation of students and the general appraisal of the programme in the university. It is equally important to provide adequate supporting staff, namely, clerks, typists, despatchers, etc. The major part of the work

relating to the preparation of instructional materials will, however, continue to be done by specially hired teachers. Although the policy of the Government of India and the UGC is not to make any payment to university and college teachers for any academic work of the same university, it seems improbable that the teachers who do not form part of the core teaching Staff could be induced to put in high quality work without additional remuneration. The core teaching staff as well as the hired teachers and the supporting staff will require training and re-training in different aspects of correspondence education. The teachers will have to be acquainted with the latest methodology and techniques in lesson writing and editing, formulation of different types of questions for students, evaluation of student responses, teaching at personal contact programmes, writing of radio talks and use of audio-visual aids for correspondence lessons.

Thirdly, lesson writing which is the mainstay of instruction through correspondence calls for great care, planning and hard work. Although most universities have been able to achieve a fairly satisfactory level in lesson preparation, improvements have to be made on the basis of a continuous reappraisal. For example, the preparation of lessons by course teams working can be tried. The lesson may initially be written by one person and then subjected to a thorough scrutiny by a course team comprising specialists in the subject concerned and finalised after making changes suggested by these experts. The use of teams is more likely to ensure that the objectives of the lesson are clearly defined and the comprehension level of the students kept in mind, than when the lesson is prepared by a single person. In addition to specialists in the subject concerned, experts in editing and production and in the audio-visual media should also be consulted to ensure proper layout, illustrations and audio-visual support, wherever necessary.

The fourth issue connected with the question of planning future correspondence education relates to stimulating sufficient interest among the students to establish proper communication with the correspondence courses institute. At present it is compulsory to submit a set number of response sheets; yet the actual percentage of persons who do so is generally much below 50, and so far the universities have chosen not to enforce their right to deny permission to those persons who have not met this requirement to sit for examination. Most students who do not submit response sheets in the requisite number claim that they have not been able to do so owing to their work and family commitments. Similarly, for one reason or another, a large percentage of students fail to participate in the personal contact programmes. To strengthen communication and rapport between the students and the teachers responsible for correspondence education, the universities will have to devise ingenious solutions. One way can perhaps be that the marks obtained by students on the basis of the response sheets are counted towards internal assessment. Another can be to so improve the evaluation of response sheets that the students are convinced regarding the desirability and benefit of their entering responses.

Fifthly, improved arrangements for learning by methods other than correspondence and personal contact have to be devised. Provision of an efficient postal lending library service is a pre-

requisite. The UGC scheme for the establishment of Study Centres and Book Banks should be used for correspondence education.[1] Taped lectures and film strips and other audio-visual aids should be available at the Study Centres. Radio is still not effectively used. Although radio talks on suitable subjects are being relayed, the lack of understanding regarding their usefulness and lack of motivation among students significantly reduce their impact. Perhaps, over a period of time this problem will be solved.

Sixthly, one of the most important points which has not received due attention in most of the developing countries is the scientific evaluation and assessment of different aspects of correspondence education. Each correspondence course institute should have an evaluation cell which should be engaged in analysing the success or failure of methodologies and media used in correspondence education and evolving new and innovative techniques of imparting instruction. It should also evaluate the success rate of different courses and draw conclusions from students' responses and reactions to various courses and teaching methods so that necessary changes and improvements may be effected from time to time. This is necessary for the proper growth and success of any innovative system in education. This cell should keep itself fully informed of the latest thinking on learning and provide necessary feed-back to course writers and correspondence course teachers. The establishment of such a cell will lend great strength to formal correspondence education by bringing about an over-all qualitative improvement and would in due course establish academic justification for correspondence courses.

Finally, we must emphasise the need for a national institution as a supporting agency for correspondence courses. This national institution would provide to the UGC, whose responsibility it is to ensure the maintenance of standards, the norms which must be attained by every university which organises correspondence courses. Whether the UGC establishes a formal accreditation system for institutes of correspondence courses or not, the need for the enforcement of norms and standards for correspondence education is self-evident for the success and acceptability of such courses. Such a national institution could also organise the training of teachers and other personnel. Training in correspondence methods has to be of a very specialised kind and cannot perhaps be organised by different universities. In fact, the national institution may need to get a cadre of experts trained in other countries, such as the USSR and Britain. Another function of the national institution would be research in non-traditional media. This would include the development of special techniques and methodologies, lesson writing, student evaluation, personal contact and communication with students etc. Yet another role for the national institution would be to assist

(1) For study Centres and Book Banks see Part II, Section D.

the UGC in planning and coordinating the expansion of correspondence education. For this purpose, it may need to itself organise a number of correspondence programmes in order to evolve modules which might be adopted by universities with such changes as may be necessary. This would be necessary if the national institution were to recommend the organisation of special types of correspondence courses.

It is to such a national institution that we now turn.

## F. THE PROPOSAL FOR THE ESTABLISHMENT OF A NATIONAL PEOPLE'S UNIVERSITY

The Education commission (1964-66) called for the expansion of the programmes of evening colleges and of part-time and own-time education. It also suggested that admissions to full-time institutions of higher education should be regulated and working persons as well as persons unable to find places in full-time institutions but wishing to continue their education should be enabled to do so through correspondence courses. This recommendation of the Commission was endorsed by Parliament in the National Policy Resolution on Education. In pursuance of this resolution the programme of correspondence courses was expanded with the support of the University Grants Commission. Meanwhile, Britain had taken steps for the establishment of an Open University as an institution of 'second chance'. Its establishment had a catalytic effect on the thinking going on in India for the use of non-traditional methods of teaching and learning.

The Ministry of Education, in collaboration with UNESCO, organised a seminar on the Open University in December 1970. The seminar was of the view that the time was ripe for India to launch an Open University. This could be part of the efforts being made to improve academic standards and to democratise access to higher education. The Open University should be conceived and designed as a quality institution with the objective of making higher education available to those who have the capacity and motivation for it but are unable to avail themselves of the existing facilities for higher education. The seminar recommended that a Committee be appointed by the Government of India to examine the different aspects of establishing an Open University.

Consequently a Working Group, under the Chairmanship of G. Parthasarathi, Vice-Chancellor, the Jawaharlal Nehru University, was appointed to study the matter in detail. The report of the Working Group was submitted in 1975. In examined the British Open University in detail and noted that it was able to reduce per capita recurring costs and to convey high quality learning materials to each individual in his home or the local study centre. The Working Group felt that the establishment of an Open University in India had to be viewed in the context of the situation of higher education in the country today. It noted that social and political awakening was rapidly spreading to the rural areas and to the less advanced sections of society so that the demand for higher education in these areas and from these social groups was increasing at a rapid pace. It also felt that although institutions of higher education were being established in large numbers every year, the debate on the regulation or expansion of higher education was likely to cause misgivings among a wide section of people because it was likely to adversely affect the interests of the less advanced sections of the community. The Working Group also noted that in the light of the tremendous expansion of enrolment, which it might be impossible to control, the resources available for higher education were comparatively limited. It was therefore not possible to provide

sufficient buildings, equipment, libraries and laboratories for the additional enrolment. Nor was it easy to multiply the number of good teachers at a fast rate. As time passed the gap between additional enrolment and the facilities provided in institutions of full-time higher education was likely to be widened further. All these factors led to a deterioration of standards. The Working Group observed that in this situation one of the solutions is the establishment of an Open University and recommended that Government of India establish, as early as possible, such a University by an Act of Parliament. The Working Group recommended that the University should have jurisdiction over the entire country.

The recommendations of the Working Group have been considered and a proposal is under consideration by the Government to establish and Open University which may be called the National People's University. Although no final decision has been taken in this regard, some details of the proposals under consideration can be given.

The university's clientele would include , firstly, the young people who are unable to secure places in full-time institutions of higher education but who wish to pursue higher studies; secondly, men and women who have entered the world of work and wish to continue their education, either for the sake of learning or to improve their work capability; and, thirdly, housewives not engaged in out-of-home work who wish to improve their qualifications in order to play a more effective role as members of the family or to take up employment.

For the first category, namely young persons who have not been able to find places in institutions of higher education, a large variety of courses similar to the university programmes is envisaged. It is hoped that this would contribute to a certain mobility. The vast category of the work force can be further divided into at least three groups. One is the group of government officials who need continuing education to improve their work capability and to be apprised of the basic policies of government. In this group, a beginning will perhaps have to be made with large homogeneous sections such as office clerks, agricultural extension personnel, primary public health workers, the armed forces, members of the police force, etc. The second group consists of professionals, i.e., doctors, teachers, and the like. This group is of immense importance for a progressive society and it is vital that such professionals are familiar with recent developments in their respective fields. Those who are outside these two categories form the third group and include such large sections of society as employees in commercial establishments, industrial workers, farmers etc.

Although the Government of India's policy is unambiguous in giving equal status to women in employment, far fewer women than men are employed in the organised sector. They, therefore, work mostly on farms and homes. In view of their central role in the family, women also have special learning needs. Apart from the skills required for running the household, women require educational programmes to become aware of their equal status and rights. It is hoped that the university would be able to organise programmes for these complex objectives.

According to plans, the proposed university would adopt a non-traditional approach to instruction. In the existing system admission to institutions of higher education is governed by the obtention of a secondary school leading certificate. In the proposed university this may not be an essential requirement and all persons who can be expected to benefit from a particular programme would be eligible for consideration. Although some of the courses in the proposed university would be similar to courses organised in other universities, the emphasis would be on programmes to serve the learning needs of homogeneous group amongst the clientele. This would necessitate considerable variety regarding the duration of the courses (some lasting a few months and others extending over three years or more) and certification. In respect of the latter, there would indeed be provision for granting degrees but in addition there would be different types of diplomas and certificates. The essential difference between the existing university system and the arrangements envisaged in the proposed university is that whereas in the former the entire curricular programme seems to be made for the examinations, in the latter this would not be so. Rather, since the pupils would be motivated learners their essential needs might be served without much importance being given to certification. The teaching style in the proposed university would not be pedagogical, comprising scholarly lectures and laboratory experiments where the course content demands it, but would be in the nature of individualised instruction mainly through the medium of correspondence but also including personal contact programmes and the mass media, like radio, television, etc. The teaching staff would not be solely composed of full-time core staff; there would be part-time and voluntary teachers who would be chosen bearing in mind the objectives and content of the course.

In the context of the growing number of correspondence courses and the increasing number of universities involved in the organisation of such courses, it is expected that the proposed National People's University will have an important role in the entire correspondence education programme. It would build up expertise in training key persons responsible for the organisation of correspondence courses in different universities. In some countries, the national governments have established agencies for the accreditation of correspondence courses. These accreditation bodies lay down the minimum norms which must be fulfilled before an institution may start such courses and the level which it must maintain. In India the responsibility for laying down norms rests with the UGC. However, the UGC requires strong institutional support in establishing appropriate norms, coordinating the opening of new courses and ensuring that courses are organised to meet the felt needs. It is hoped that the proposed university will provide this very important service to the UGC. The university will be particularly qualified to do so because one of its most important functions will be research in distance education and instructional media.

The Government of India, even after a decision is taken to establish a National People's University, does not intend to immediately ask Parliament to consider legislation for the establishment of such a university. What is proposed is that a suitable person, known for his interest and expert knowledge and who can command the respect of the universities in India would be asked to prepare the full blue-print for the establishment of such a university. This person will have a rather unenviable task, because the proposed university will not necessarily be modelled after any existing university in India or, indeed, in any part of the world. That person will, therefore, have to prepare a design of a university which would meet the special needs of the country, visualised within the constraints under which the university will have to work. It is expected that even after such a person is designated, he will take about a year, perhaps longer, to complete this task.

## MODERNISATION OF HIGHER EDUCATION

### G. INDIAN INSTITUTES OF TECHNOLOGY (IIT)

Background

The approach and structure of engineering education in India before independence were purely traditional. There was hardly a course imparting modern engineering concepts or training manpower for the needs of the country. The curriculum was pedestrian and loaded with conventional engineering courses. Science used to be taught as a service course, Humanities and Social Sciences having little place in the syllabus. In teaching, the emphasis was on the acquisition of information rather than concept building. Research and post-graduate programmes hardly had any place. There was no inter-action between eminent engineers, scientists and social scientists.

Immediately after Nehru was appointed Prime Minister in 1946, while India was still a Dominion and final negotiations for independence were taking place, he started thinking about the need for institutes of excellence comparable to the best in the world, as these alone could serve as pace-setters of development and train high quality technical manpower. A committee was appointed to consider whether it was desirable to have (a) a central institution with a number of subordinate institutions affiliated to it, or (b) several higher institutions on a regional basis, or (c) any other organisation, with a view to ensuring an adequate supply of highly qualified and trained technical personnel required for industrial development. The Committee recommended that at least four high level technical institutions, one each in north, east, south and west would be necessary. It also considered it to be fundamental to establish and maintain close links between the public, industry and education and proposed that these institutions be located within easy reach of large industrial areas. It recommended that these institutions conduct under-graduate courses but emphasised that the standard for graduation should not be lower than that in any first-class institution abroad. The Committee was of the view that facilities for post-graduate study and for research in engineering and technology should be concentrated in these institutions. Finally, it recommended that selection for admission be made purely on merit, but that a proportion of seats be reserved for the educationally backward classes.

The first Institute of Technology on the lines recommended by the Committee was established at Kharagpur in West Bengal in 1951. Five years later it was declared an institution of national importance by an Act of Parliament.[1] The Act empowers the Institute to provide instruction and conduct research in various branches of engineering, technology, science and the arts, to promote learning and disseminate knowledge in those branches, to hold examinations and to grant degrees, diplomas and other academic credentials. Similar Institutes were established at Madras, Kanpur, Bombay and Delhi in 1959, 1960, 1961 and 1963, respectively. Several industrially and technologically advanced countries collaborated in the establishment of the IITs. Table III.9 gives a summary in respect of these five institutions.

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(1) For the Constitutional provision regarding an Institution of National Importance, see Part X-D.

Table III.9

Establishment and collaboration of IITs

| Name of IIT | Year of establishment by Acts of Parliament | Collaborating agency/ country | Location in India |
|---|---|---|---|
| Kharagpur (Calcutta) | 1956 | UNESCO Assistance for development | East |
| Madras | 1959 | Federal Republic of Germany | South |
| Kanpur | 1960 | United States | North |
| Bombay | 1961 | USSR | West |
| Delhi | 1963 | United Kingdom | North-West |

Before we describe in detail the organisation, administration and some of the innovative aspects of the IITs, it would be useful to note some basic facts. These are given in the table below.

Table III.10

Basic facts in respect of IITs (1974-75)

| | IIT Kharagpur | IIT Madras | IIT Kanpur | IIT Bombay | IIT Delhi |
|---|---|---|---|---|---|
| Student strength | | | | | |
| Undergraduate | 1,662 | 1,269 | 1,208 | 1,295 | 1,156 |
| Postgraduate | 749 | 683 | 354 | 414 | 439 |
| Research scholars | 220 | 224 | 809 | 337 | 40 |
| Total | 2,631 | 2,176 | 2,371 | 2,046 | 1,635 |
| Student intake | | | | | |
| B. Tech. | 420 | 255 | 251 | 291 | 308 |
| M. Sc. | 117 | 43 | 76 | 55 | 48 |
| M. Tech. | 366 | 222 | 425 | 163 | 238 |
| P.G. Diploma | 69 | 20 | - | 21 | 11 |
| Ph. D. | 8 | 40 | 449 | - | 85 |
| Student output | | | | | |
| B. Tech. | 272 | 244 | 276 | 268 | 197 |
| M. Sc. | 60 | 52 | 29 | 52 | 37 |
| M. Tech. | 141 | 183 | 91 | 161 | 114 |
| P.G. Diploma | 34 | 19 | - | 35 | 17 |
| Ph. D. | 46 | 74 | 52 | 37 | 46 |
| Research Publications | 256 | 358 | 265 | 157 | 448 |
| Faculty strength | 468 | 319 | 270 | 289 | 252 |
| Campus area (in hectares) | 560 | 253 | 420 | 220 | 125 |
| Annual budget (Rs. in lakhs) | 303.35 | 306.60 | 366.00 | 299.83 | 267.82 |

Organisation and administration

As is evident from the preceding table, the IITs are adequately funded. Each one of them has a vast modern campus. It was realised, from the beginning that education could be confined to class-room situations and there was a need for continuous contact between the teachers and the taught. The institutions are therefore residential in nature. Generally speaking campuses are divided into three zones, viz. instructional, residential and recreational. The laboratories and workshops are well equipped, and compare well with those of similar institutions in technologically advanced countries. Almost all the Institutes have computers, modern measuring and testing equipment, closed circuit television and other modern equipment for purposes of teaching and research. Their libraries have adequate number of books and journals and they are helped by scientific agencies in obtaining up-to-date research information. They have well equipped lecture theatres, playgrounds, class-rooms etc. These facilities are continuously being expanded and reorganised to meet the needs of the Institutes.

The most important asset is the highly qualified and motivated technical teaching staff, with a keep interest in course development, particularly as regards interdisciplinary and interinstructional areas of science and technology. Most IIT teachers have doctorate degrees; they are appointed on the basis of an all-India competition. Suitable arrangements have been made for members of the teaching staff to pursue research and professional education. The IITs are also adequately staffed with technical and non-technical workers.

The students are admitted to the IITs through a Joint Entrance Examination for all five institutions. This is a most prestigious examination taken by highly qualified students, as the students' parents consider admission to an IIT as a guarantee of a successful career. Each IIT draws students from all over the country, and also from abroad. The typical IIT student is of middle class origin. However, 20% of seats are reserved for the socially deprived sections of society namely, the Scheduled Castes and the Scheduled Tribes. Special remedial courses are provided for persons belonging to these groups so that they can keep pace with the high standards of education in these institutions and compete with the rest of the student body.

Each IIT is an institution of national importance, declared as such by an Act of Parliament, and each one of them is, therefore, an autonomous organisation fully financed by the Government of India. At the helm of the administrative structure of the IITs is the IIT Council, headed by the Education Minister. Its membership comprises -

Chairmen of the Governing Boards,
Directors of all IITs,
Chairman of the University Grants Commission,
Director-General of the Council of Scientific and Industrial Research,
Chairman and the Director of the Council of Indian Institute of Science,

Nominees of the Government of India,
Nominees of the Visitor,
Representatives of the All-India Council of Technical Education, and
Representatives of the Parliament.

The functions of the IIT Council include the general supervision of the IITs and the establishment of policy guidelines. The Council also ensures the liaison between the different IITs as well as between the IITs on the one hand and other institutions of higher education industry and other sectors of development expected to be served by the IITs, on the other.

Each IIT is managed by a Board of Governors. The Chairmen of the Boards of the different IITs are eminent scientists or distinguished public figures. The membership of the Board of Governors comprises nominees of the Senate, nominees of the State Governments of the region, the IIT Council, as well as some members of the teaching staff of the IIT concerned. Within the financial allocation made for a particular IIT, its Board approves the budget, authorizes the creation of posts and approves selections made by the Selection Committees. The Board functions through a variety of Committees such as the Finance Committee, the Buildings and Works Committees, etc. Academic policy, courses of study and matters connected with examinations are the responsibility of the Senate which, in turn, appoints sub-committees to look into specific academic questions arising from time to time. The administrative arrangements for the IITs have worked satisfactorily and have helped them to become the pace-setters in technical higher education.

Academic policy and curricular programmes

All IITs offer a five-year course leading to a B.Tech. degree. For example the Delhi IIT, has B. Tech. courses in Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering and Textile Technology. While constantly attempting to upgrade and modernise the courses leading to the B. Tech. degree the IITs lay considerable stress on post-graduate courses and research directly linked with the National Science and Technology Plan.[1] Centres and schools of research have been set up in each IIT to organise interdisciplinary research in well-defined areas. For example at Delhi there are Schools of Energy Studies and Systems

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(1) The National Science and Technology Plan was prepared at the instance of the Government of India by the National Committee on Science and Technology. The Plan focusses on the solution of current problems of national development in the fields of agriculture, industrialisation, productivity, environment, population, etc. and includes concrete programmes for technological improvement to subserve the nation's socio-economic effort. The objective behind the preparation of the Plan has been spelt out as follows: "Its formulation and implementation must be undertaken conceptually, methodologically and institutionally, as an integral part of the process of socio-economic planning."

Studies, while at Madras there are Centres for Composite Structures, Design Engineering and Energy Research. Several research projects have been sponsored by various branches of industry and government agencies. Among the Government agencies which have sponsored several research projects are the Defence Science Organisation and the Department of Science and Technology. The following chart gives examples of activities in the IITs:

| | |
|---|---|
| **IIT, Bombay** | |
| Post-graduate courses | Appropriate Technology for Rural Development, Ground Water Technology, Oceanography, Oil Prospecting |
| Centres and Schools of Research | Sophisticated Instruments Centre, Resources Engineering, Environmental Science and Engineering, Information Retrieval Centre |
| Sponsored Research Projects | Hydrodynamics of Plantforms, Mechanical Rigs and Buoys, Canals and Dams in Black Cotton Soil, Tali Antenna Structures, High Capacity Switches. |
| **IIT, Delhi** | |
| Post-graduate courses | Energy studies, Computer Technology, Integrated Circuits |
| Centres and Schools of Research | Energy Studies, Design Dynamics and Tribology, Biochemical Engineering, Radar, Systems and Management, Materials |
| Sponsored Research Projects | Transport of Solids through pipes. Precipitation and Fracture Studies of Steels, Radar and Communication Projects, Thermally Stable Polymers, MOS Devices. |
| **IIT, Kanpur** | |
| Post-graduate courses | Materials Science, Computer Sciences, Nuclear Engineering and Technology |
| Centres and Schools of Research | Materials Science, Environmental Engineering, Information Science, Lasers and Laser Systems, Process Engineering |
| Sponsored Research Projects | Alloy Development, Fluidic Devices, Design of Computers' Drawing of Glass Fibres. |
| **IIT, Kharagpur** | |
| Post-graduate courses | Coal Process Engineering, Dairy Technology, Computer Engineering |
| Centres and Schools of Research | Materials Science, Radar and Telecommunication Engineering, Cryogenic Engineering, Food Processing and Preservation |

| | |
|---|---|
| Sponsored Research Projects | Mineral Exploration, Mine Ventilation, Artificial Earthquakes, Alloy Development, Corrosion Studies, Modernization of Country Boats. |
| IIT, Madras | |
| Post-graduate courses | Television Engineering, Maintenance Engineering |
| Centres and Schools of Research | Energy Systems, Materials Science, Systems and Devices, Transportation Engineering, Ocean Engineering, Information Systems. |
| Sponsored Research Projects | MOS Devices, Aerial Camera System, Signal Processing, Techniques, Rural Energy Complex, Studies of river basins. |

On the basis of the deliberations of the IIT Council, the Boards of Governors of different IITs and numerous seminars and other forums, an academic policy governing the curricular programmes has now emerged. This policy isgenerally applicable, to all IITs and the comments that follow practically hold good for each one of them.

The first characteristic of the curricular programmes is the provision of balanced and broad-based courses. The courses run across disciplines: engineering, technology, applied sciences, social sciences and humanities. Science courses are not being treated as service courses but as significant in themselves, for the understanding of the method they impart as well as for the specific body of information. The Kanpur IIT, for example, has big departments of fundamental sciences, some even larger than some of the Departments of Engineering in the Institute. It is also argued that if IIT graduates have to play an effective leadership role they must fully understand human nature and socio-economic problems. Without an interaction of the social sciences and the humanities, on the one hand, and technology and engineering, on the other, the objective of developing an industrial culture geared to the welfare of the community cannot be achieved. Consequently, the undergraduate curricula has been organised around a strong foundation of science courses, with the humanities and the social sciences as an essential part. It is a characteristic feature of the IITs that the courses in the social sciences and the humanities are split up into specific course units and students are free to choose courses across disciplines.

The second aspect of the curricular programme is the constant effort to evaluate and improve it. For this purpose, a group of IITs teachers, experts drawn from the neighbouring engineering colleges and persons connected with industry keep regular contact and formulate outlines of curricular revision. The close links between the IITs and industry provide a motivation to update and reorient the curricula and syllabi to suit the requirements of industry. The Council of the IITs has divided the curriculum of all IITs into five cluster areas and has assigned one of these areas to each IIT. In respect of that cluster, the IIT concerned is expected to design curricula which are modern and suited to the country's needs.

The third significant aspect of curricular programmes at the IITs is the method of teaching and evaluation. Since each IIT is autonomous, it is able to adopt non-traditional approaches to teaching. Class-room contact between the students and teachers has been restricted to 24 hours a week as against 40 to 48 hours in other engineering institutions in India. Almost all IITs believe that less contact hours between students and teachers give the students sufficient time for the preparation of assignments, use of the library, laboratory and workshop and to follow their own creative activities. Teachers also have more time to provide students with individual guidance, conduct research and better prepare their lectures. This also gives them time for industrial consulting through which they obtain examples of real industrial problems for their students to treat in their project work. All staff members, irrespective of their status and position, are required to teach for the same amount of time. Student assessment has also been modernised. The academic session is divided into semesters and student evaluation takes place on a continuous basis by internal assessment. A variety of examination and assessment procedures are followed; written examination, oral examination, seminars, practical and project work, term papers, sessional work, etc. This keeps the students under constant motivation and engenders a spirit of competition amongst them.

The fourth significant characteristic of the academic programme at the IITs is attention to research. From their inception, all the Institutes have been deeply involved in research activities which have a bearing on development problems, both in urban and rural areas. It needs to be underscored that most research activities of these Institutes were carried out within the framework of India's planned development strategy, and more particularly in relation to the National Science and Technology Plan. Although only 20% of India's population lives in urban areas[+] have a profound influence or national life. The problems of urban development are acute in the areas of housing, water supply, environmental population, transportation, etc. The IITs have accepted the challenge to study these problems scientifically and to suggest technological and socio-economic remedies. In several areas of importance for the urban sector, the IITs have set up special programmes of research. For example the Materials Science Centre of the Kanpur IIT, is doing significant work on the problems of housing and building technology, including, low-cost housing. At its Centre of Transportation and Information Retrieval, the Madras IIT, is engaged in problems of highway capacity, optimal planning of transportation network, traffic safety, etc. In all IITs the problems of biological and industrial pollution are attracting the notice of scientists and engineers. The IITs have also taken up the challenge of designing and developing technologies which would change the living pattern of people in the rural areas. So far, special attention has been given to studies such as bio-gas plants, the transfer of appropriate technology related to agricultural sector, farm management technology, soil technology, dairy engineering, rural roads, etc. Research at the IIT's takes various forms: undergraduate and post-graduate student projects, the investigations of research scholars enrolled in doctorat programmes, and of course, research undertaken by members of the teaching staff.

[+]this equals 120 million in absolute terms, and the conditions of life in those areas...

Conclusion

Technological growth is a major component in the progress of any nation. In India, technological advancement remained stultified till independence. The IITs which were envisaged as a source of versatile engineers who would catalyse the process of industrialisation in the country, have so far fulfilled these expectations.

The IITs, in their concept and actual programmes, have proved to be an innovation of far-reaching significance. As we have seen in the preceding pages, the academic policy and curricular programmes of the IITs have several characteristics which make them pace-setter institutions for technological education in India. Special mention needs to be made of the interdisciplinary studies, the built-in mechanisms for curricular improvement, and non-traditional methods of teaching and pupil evaluation. Moreover, for the first time institutions of engineering and technology have engaged themselves in in research in a big way.

An important factor to be kept in mind in any programme of professional manpower training is the need to inculcate an innovative, practical and flexible approach, the ability to assess all relevant factors in a balanced and realistic way and an appreciation of the importance of a proper balance between theory and practice. This is particularly true of institutions engaged in training engineers, scientists and technologists. Liaison with industry is, therefore, a necessity for the translation of industrial requirements and practices, not only to benefit industry but to bring meaningful educational practices into the institutions of higher learning. This is equally important for the conduct of research and development work in various branches of engineering and the sciences. The industrial consultancy centres established in the different IITs are the first of their kind in Indian higher technological institutions they serve as a general contact point between the Institutes and industry and more specifically contribute to utilisation of the facilities built up at the Institutes.

Yet another remarkable feature of the IITs has been their contact with and support to other engineering institutions. A reference has already been made to the involvement of neighbouring institutions of engineering and technology in curriculum improvement programmes of IITs. Under the "Quality Improvement Programme" Long-term and short-term courses are provided by the IITs to the staff of neighbouring colleges for their continuing education and to guide them in the improvement of curriculum. Under the former, staff of the neighbouring colleges come to IITs as teacher-fellows. A few seats in post-graduate and Ph. D. courses are reserved for such staff members. Under the short-term programmes, the teachers of neighbouring colleges participate in seminars and other activities and implement the innovative approaches in their respective institutions.

What has been the impact of this important innovative institution ? The impact of any technical higher education institution can be seen in terms of the teaching staff and the students. IIT teachers and research students have published a fairly large number of research papers. To give one example, the

Delhi IIT was engaged in 448 research projects in the year 1975-76. Further, as is evident from the data provided in the annual reports of the IITs, every year a large number of patents for a variety of instruments and process standardisation go to IIT teachers and researchers.

On the basis of a survey on the employment experiences of IIT alumni, it can be said that there is a big demand for IIT graduates. Generally speaking, the industrial enterprises interview the students while they are still in the Institute and the students generally can choose the type of jobs best suited to them. The survey revealed that about 60% of IITs students had two or more offers before entering employment and only 5% had to wait for a little more than a year to get their first appointment after graduation. One of the main objectives of the IITs being to produce competent research engineers who can promote research and development in industry, it is gratifying to note that more than 25% of the alumni are engaged in such activities.

In conclusion it can be said that the IITs have been an innovation of far-reaching implications. Their success lies mainly in providing young Indians with a technological education the standards of which are internationally comparable and in linking technological education with the goals of the country's scientific and technological development. The reasons for this success are not far to seek. The international collaboration with which the IITs began secured for them technical expertise from the most advanced countries of the world. Government has always strongly supported these institutions not only financially but also in the form of an explicit commitment which has been of singular importance. The efforts put in by the teaching staff of these institutions to link advanced technology with the nation's needs is an important clue to the success of these institutions. The legal position which enable the Institutes to function as autonomous self-governing institutions has permitted a level of flexibility uncommon among government-funded institutions.

## H. AGRICULTURAL UNIVERSITIES

Higher education in agriculture before 1960 centred around agricultural colleges which were affiliated with general universities for their academic programmes and for the award of degrees. Like other university educational programmes, agricultural education during the British period was mainly directed to the production of graduates for employment in government. The era of agricultural universities, which regenerated not only agricultural education but also agricultural research and extension began in 1960.

At the time of independence, there were 17 colleges of agriculture in India with an enrolment of about 1,500 students. Even after 1947, the growth of agricultural colleges as affiliated and constituent colleges of universities continued under the Departments of Agriculture of the States. Instruction was provided in the agricultural colleges while research was conducted almost independently by the State Departments of Agriculture. The training of students was unrelated to the problems of agriculture faced by the farmers in the field and to the research efforts.

In November 1954, the Government of India, realising the importance of agricultural education and the role that it should play in the development of agriculture, appointed a joint Indo-American team with the assistance of the U.S. Technical Cooperation Mission in India. This team was to make a comparative study of the institutions dealing with agriculture in the United States and India and to arrive at recommendations for the improvement of agricultural education in India and for the promotion of cooperation and coordination between the federal and State authorities in the field of agricultural research. This team submitted its report in September 1955. Its recommendations laid the foundation for subsequent efforts to improve in agricultural education in India, enhance the value of research work in agricultural science and communicate research findings to the tillers of the soil. The recommendations ultimately resulted in the establishment of agricultural universities.

As a result of the recommendations of the joint Indo-American Team, an operational agreement providing for assistance from the United States Agency for International Development was signed. The purpose of this agreement was to strengthen institutions in the field of agriculture with the three-fold functions of teaching, research and extension. This agreement provided for five well-known American Land Grant universities to work in cooperation with assigned colleges of agriculture in the different regions of India. Under this arrangement several agricultural colleges in India were assisted through the additions of modern equipment, acquisition of books and journals, advanced training of staff and provision of specialised services. Also on the basis of the recommendations of the Indo-American Team, the first Agricultural University, modelled after the Land Grant College of the United States, was set up at Pantnagar in Utter Pradesh in 1960.

Main characteristics

Unlike general universities, agricultural universities have a well-defined mission which consists of serving farming communities through a reoriented system of teaching, research and extension education. This three-fold function is designed to strengthen the ecological, social, economic and educational infrastructures which are essential to increase and sustain productivity. In order to achieve these objectives, the agricultural universities adhere to certain basic principles:

Autonomous Status. These universities are fully autonomous in planning, organizing and implementing their three-fold programme. Nevertheless, the cooperation of the State Departments of Agriculture and other agencies concerned with agricultural development is always solicited in order to have outside advice concerning service-oriented programmes and activities.

Interdisciplinary approach. Agricultural sciences are applied in character and intent. This is why there is greater stress on achieving maximum interdisciplinarity and cooperation amongst members of the teaching staff. An agricultural university campus basically comprises five colleges: agriculture, animal sciences, agricultural engineering, home sciences and basic sciences, and humanities. The close link between the basic sciences and the applied fields of agriculture has been fully recognised, and the former, therefore, has been gradually strengthened to give strong support to the latter.

Integration of Teaching, Research and Extension. One of the unique features of an agricultural university is the integrated functioning of teaching, research and extension. These three functions are in fact inherently interdependent. Teaching in order to be effective draws technical know-how from research and the understanding of farming situations and problems from extension agencies; research programmes must have the direct link with farm problems which results from a constant interaction with extension personnel and farmers, and extension programmes must be based on research findings. Naturally, under this pattern of education, a teacher is also a researcher or extension worker and vice versa depending upon his interests, specialisation and needs.

Internal assessment system. Internal assessment of the students as an integral part of the course-credit system is another essential point. The theory is that one who teaches or guides research is in a better position to evaluate the performance of the students than the external examiners. Moreover, evaluation is intended to improve the performance of the students by periodic assessment, and not to arrive at a single and final rating. All agricultural universities have followed this system. External examinations are only limited to the evaluation of M.Sc. and Ph.D. dissertations and theses.

Trimester or semester system. Unlike the traditional system of education, the academic year is now divided into trimesters (3 months) or semesters (4½ months). This has the definite advantage of breaking the papers or a subject into several small handy courses

each worth a set number of credits. These are intensive courses, and students are frequently examined by way of quizzes, mid-term and final examinations and other written and reading assignments. The failure of the student in one course does not debar him from taking another course; he can pass the former course by repeating it simultaneously. Students are also permitted to continue their studies following a break of a trimester or so caused by unavoidable circumstances. Under this system, student performance has improved and wastage and stagnation have been substantially reduced.

In order to best depict the broad organisational structure and various other components of agricultural universities, it maybe appropriate to describe one agricultural university in detail, rather than to touch upon some aspects of several universities. The first agricultural university - Gobind Ballabh Pant University of Agriculture and Technology, Pantnagar, will serve as illustration.

A Case Study - G.B. Pant University

Situated in the fertile Terai area at a distance of over 80 kilometers from the nearest city, the university was established in 1960 and was fortunate in having a dynamic and success-oriented administrator D.P. Singh, as its Vice-Chancellor for a number of years.

Organisation. For the execution of university's programmes, the following bodies and authorities were constituted with due representation from a cross-section of the faculties university officers, Government Departments and other agencies which can contribute towards the growth of the university:-

1. the Board of Management - the highest body for policy and planning;
2. the Academic Council - the highest body for academic matters;
3. the Extension Advisory Council - for the extension education programmes of the university;
4. the Research Advisory Council - for planning and organising research activities;
5. the Boards of the Faculties of Agriculture, Veterinary medicine, Engineering, Home Sciences and Basic Sciences and Humanities. These Boards are located at the college level, whereas all others are university-level bodies.

The university consists of the following constituent colleges: (i) College of Agriculture, (ii) College of Veterinary Medicine, (iii) College of Technology, (iv) College of Basic Sciences and Humanities and (v) College of Home Science.

In addition, the following research centres and stations are attached to the University: (a) Research Farm, (b) Horticulture Research Centre, (c) Livestock Research Centre, (d) Rice Research Station, (e) Cotton and Tobacco Research Station, (f) Research and Testing Station, (g) Potato Research Laboratory, and (h) Horticultural Research Institute. Some of these research centres are situated in proximity to the university campus, but most of them are at a considerable distance from the university campus. The location of the Centres is dependent on the area where the produce to which they

relate is mostly grown and in respect of which the university is responsible for the organisation of extension programmes.

The Pant University has the following sanctioned academic staff:

Table II.11

Sanctioned academic staff of G.B. Pant University (1975-76).

| Colleges | Professors | Associate Professors | Assistant Professors | Other Staff |
|---|---|---|---|---|
| College of Agriculture | 12 | 27 | 66 | 12 |
| College of Veterinary Medicine | 6 | 13 | 28 | - |
| College of Basic Sciences and Humanities | 6 | 15 | 32 | 4 |
| College of Technology | | | | |
| Agricultural engineering | 4 | 8 | 13 | - |
| Directorate of extension | 2 | 4 | 10 | 131 |
| College of Home Science | 4 | 5 | - | - |
| Directorate of Extension | 5 | 36 | 48 | - |
| | 39 | 128 | 202 | 147 |

Physical facilities. There are adequate buildings for all the colleges and research centres as well as a staff residence and a student hostel and facilities for games and sports. The instructional farm for practical training has an area of 4,669 hectares, all irrigated. In addition there is a 16,000 hectares agricultural farm, which partly finances the university. Out of this, 50 hectares are exclusively earmarked for the students' practical work. A group of 8 students is provided with 1½ hectares of land for their "learn while they earn programmes". The post-graduate students are provided land depending upon their teaching and research requirements. The university has some 1,040 heads of cattle, including cows, buffaloes, and bulls, 21,450 fowls and 60 goats. There is a well established veterinary hospital and ambulatory clinics. The students welfare centre includes a gymnasium, a swimming pool and other facilities. Student sports groups have been organised. A medical service is also available on campus.

The university library is recognised as the heart of the universities academic activity. In its collections and services the library is completely integrated with the teaching, research and extension programmes. The library has a collection of over 110,000 items including books, pamphlets, reports, proceedings, films, maps etc., and subscribes to some 1,350 periodicals.

Curricular programmes. The colleges offer a wide variety of degree programmes in different subjects. Programmes at the master's level are available in 12 subjects in agriculture, 10 subjects in veterinary medicine, 6 subjects in Basic Sciences and Humanities, 4 subjects in Agricultural Engineering, and 2 subjects in Civil Engineering. Ph.D. programmes are offered in 7 subjects in the field of agriculture and 3 subjects in Veterinary Medicine.

In the 1974-75 academic year the University enrolled 1,728 under-graduate and post-graduate students and the number of graduates was 375.

The integrated system of teaching, research and extension is facilitated by the location of all the Colleges on the campus. There are common courses, specially in the earlier stage, for students in the various colleges, and the laboratories, Experiment Station, University Farm, Library, Extension Service etc. are commonly shared. Research projects are evolved by the Director of Research and various departments contribute to these. The fruits of research are extended to the field and problems from the field are brought to the research workers for solution. Teaching and research are thus kept up-to-date and practical, and the fruits of science and technology are systematically utilised for the development of the country.

The trimester and course and credit system permits specialisation, flexibility and comprehensive training, frequent examinations and regular work by the students throughout the period of their stay at the university. The system ensures that the weaker or otherwise poorly-adopted students drop-out in the early stages so that the overall wastage in the form of failures is minimised. As student performance at all examinations is reflected in the cummulative or overall grade point average, students cannot afford to be negligent at any time during the course of their studies.

The policy of the university is to ensure that no deserving student should suffer in his studies because of financial difficulties. With this end in view, financial assistance is provided on a liberal scale, so that roughly 50 per cent of under-graduate students receive financial assistance in one form or another from the university or from outside agencies. All Ph.D. students and up to 75% of post-graduate students are eligible for appointment as graduate teaching assistants or research assistants. This not only provides financial support to the students, but involves them in the academic activities of the university in a very direct way.

The university research programmes are quite elaborate and comprehensive. Besides institutional research projects, there are 21 All India Coordinated Research Projects financed by the Indian Council of Agricultural Research; 22 ad hoc research schemes financed by that Council; 3 Research Projects financed by the Council of Scientific and Industrial Research and several other financed by government and private agencies.

Students evaluation system. The university has adopted an internal system of examination. The following types of examinations are held: -

(i) Short quizzes (announced and unannounced);
(ii) Hourly examinations;
(iii) Proficiency examinations;
(iv) Practical examination;
(v) Oral examination (for post-graduate students only);
(vi) Preliminary examination (for Ph.D. students only); and
(vii) Trimester final examination (once in a trimester).

The weightage given to the various examinations is a follows.

| | | |
|---|---|---|
| i. | Short quizzes | 10 to 15 per cent |
| ii. | Hourly examinations | 20 to 40 per cent |
| iii. | Practical laboratory and other arrangements | 20 to 30 per cent |
| ivv | Final examination | 40 per cent |

The following letter grades are awarded with the meaning and numerical value indicated below:

Table II.12
Letter groupsat G.B. Pant University

| Percentage of marks | Equivalent letter grade | Meaning | Numerical value of grade in points |
|---|---|---|---|
| Four courses 80% or above marks | 'A' | Excellent | 5 points |
| Below 80% but not less than 70% marks | 'B' | Good | 4 points |
| Below 70% but not less than 60% marks | 'C' | Fair | 3 points |
| Below 60% | 'D' | Failure | 2 points |
| For thesis | 'S' | Satisfactory | |
| | 'U' | Unsatisfactory | |

Requirements for the Master's Degree include the successful completion of a scientific investigation and creditable research reported in the form of a thesis. The ability to widen the field of knowledge by distinct original contribution is an essential qualification for a Ph.D. degree. A candidate must, therefore, present satisfactory evidence of such ability by submitting a thesis embodying the results of his research on a creditable problem within the field of his major subject.

Other noteworthy aspects of the examination system in this University are as follows:

i) The answer books are returned to the students so that they can understand their mistakes. In the case of final examinations they are shown at the beginning of the next trimester.

ii) Marks obtained by students in quizzes and hourly examinations are also shown to them. Mistakes are explained as well as the reasons for deducting marks.

iii) Students are allowed free scrutiny of their grades. The grade reports are also displayed on the notice broards for the information of the students.

iv) Some teachers at the end of the course give evaluation forms to the students to give their comments on the course.

Student services. The University while recognising that needy students must be helped, encourages self-reliance and financial independence. For this purpose a large number of opportunities and facilities are provided for students to earn a part of their expenses through part-time employment on the 16,000 acre agricultural farm, Experiment Station, laboratories, poultry-keeping, in the office etc. Further, long-term interest-free loans are also provided on a liberal scale. The students worked and earned Rs. 3,56,000 during the year 1972-73 by working on part-time piece-meal jobs. Since the establishment of the university, 1,862 students received Rs. 1,195,533 as financial assistance from various sources, including a sum of Rs. 151,063 given as short-term loans to 721 students.

Recognition of the dignity of honest work is considered necessary to education in effective citizenship. For this purpose, a work programme, requiring the students to do a certain amount of supervised manual labour regularly, is a compulsory training course for all under-graduate students every trimester. These programmes are a part of the curriculum at the under-graduate level and the grades obtained in these activities are counted towards the students' overall rating.

Finance. The major source of finances of the Agricultural Universities are the State Governments. The Indian Council of Agricultural Research (ICAR) also provides funds for development schemes and specific research projects. The Pant University was provided Rs. 20 million in the Second Plan, Rs. 14 million in the Third Plan, Rs. 11.08 million during 1966-67 to 1968-69 and Rs. 26.62 million during the Fourth Plan for agricultural education by ICAR. Under the All India Coordinated Research Projects and ad hoc research schemes, the Council has sanctioned about Rs. Rs. 100 millions to the university for the Fifth Plan period (1973-74 to 1978-79).

An appraisal

The G.B. Pant Agricultural University is a success story. Several factors have contributed to this. Apart from the dynamism of the Vice-Chancellor who spent a long term at the university, a well-chosen academic staff and ample physical facilities, the Pant University had the great advantage of not inheriting any existing colleges and of having arrived at a close understanding with the State Government regarding the role of the university in research and extension. There are other universities also, for example, the Punjab Agricultural University, the Haryana Agricultural University and the Tamil Nadu Agricultural University, which have followed

policies and programmes similar to those of the Pant University and which compare favourably with that university in the impact they have had in their respective regions and in regard to the quality of their students. These and similar other good universities have had a tremendous impact on agricultural production.

These universities cannot however be considered as typical agricultural universities and the standards and achievements are uneven. There are some universities which are indistinguishable from an agricultural college and others which have not been able to effectively integrate teaching, research and extension. The universities which have not been able to make much progress are generally those which have inherited a large number of teachers from the agricultural colleges which merged with the universities at the time of their establishment, and from the research institutions when these were taken over by the university. Many of these persons do not have the high academic standard and progressive orientation demanded by a successful agricultural university. The second difficulty has been the reluctance of the State Governments to transfer research and extension functions to some of the universities. Although in nearly every State the functions of research and extension have theoretically been transferred to agricultural universities, in reality this has not happened everywhere. The Departments of Agriculture of some States are known to be reluctant towards such transfer because this would suddenly reduce their operations and also because they are not convinced that the transfer would indeed be good for the people of the State.

While making an assessment of the innovation of agricultural universities, it needs to be remembered that although the performance of all the universities is not equally impressive, which is quite natural, the methodologies developed and refined in some of them hold a promise for India's future, which depend to a large extent on the prosperity of the farmers and the rapid increase of agricultural production. One of the aspects of agricultural universities which has drown critical comment is their lack of interest in small and marginal farmers. Perhaps this has something to do with the low importance being given to the study of social sciences at these universities. Since agricultural scientists, particularly those engaged in extension work, have to deal with a complexity of social phenomena it would be desirable to strengthen the social science component in these universities.

The agricultural universities' effective integration of teaching, research and extension has implications for India's system of higher education as a whole. The idea that this threefold combination should be the objective of every university is acquiring general acceptance. For example, the Departments of Sociology and Social Anthropology in various universities are beginning to organise research in close coordination with the different programmes of tribal development and are also making necessary adjustments in their curricular programmes, keeping in view the new developments in the tribal situation. As a growing recognition of the role of general universities in the field of extension, extra-mural and extension departments have been set up in several universities and this university activity has been

recognised by the UGC as legitimate justification for a grant. A modern system of examinations and the division of the academic year into trimesters and semesters is being adopted by several other universities. Indeed, experts in student evaluation in the agricultural universities act as resource persons in the seminars and training workshops for teachers of other universities.

It would perhaps be appropriate to conclude this section by referring to the observations of the Agriculture Commission which in 1973 submitted two separate reports on Agricultural Education and Research and Agricultural Extension. The reports acknowledge the importance of agricultural universities in the fields of research and extension, apart of course from agricultural education. In making its recommendations the Commission has divided research into three categories, viz., fundamental, applied and adaptive, and has expressed the opinion that the agricultural universities should be entrusted with fundamental and applied research, and the responsibility for adaptive research should rest with the State Departments of Agriculture. The Commission observed that although there had been appreciable advance in agricultural education at the higher levels, this had not been the case at the lower and middle levels. It therefore recommended an agricultural orientation at the primary and secondary school levels. The Commission further observed that the decision of the Government of India to offer programmes of vocational education at the secondary level and non-formal education at all levels, are of special relevance to agricultural universities. The universities should enter the area of teacher preparation for vocational agricultural courses and should provide expertise in programmes of non-formal education.

## I. SOME RECENT INNOVATIONS

In the last twenty-five years, enrolments in institutions of higher education have increased tremendously. . Although the rate of increase has falle: from about 15% in the years 1967-68 to 1969-70 to about 5% in the last four years, the total number of students has increased from about 1.37 million in 1967-68 to about 2.35 million in 1974-75. This phenomenal increase is quite beyond the capacity of the system as it exists. There is a very real danger that the quality of instruction would suffer from an expansion of higher education of this magnitude. The Government of India appointed a Committee on the Governance of Universities under the Chairmanship of P.B. Gajendragadkar which submitted its report in 1971. It observed that "the laboratory and library facilities are inadequate and buildings unsuitable. The conditions in which students live and work are in most cases very unsatisfactory. There are neither enough scholarships nor hostels nor opportunities to develop healthy personality and to spend leisure time gainfully".[1]

The problems posed by expanding enrolments and proportionately shrinking physical facilities are exacerbated by the existence of outdated and socially irrelevant curricula, obsolete text books, an unrealiable and superficial system of examination, uninteresting teaching methods and in many cases conservative administrative practices which are a common feature of the system of higher education. In such a situation the great goals envisioned by Nehru remain beyond realisation. He said, "A University stands for humanism, for tolerance, for reason, for the adventure of ideas and for the search of truth. It stands for the onward march of the human race towards even higher objectives".[2]

The University Grants Commission, various institutions of higher learning and several individual educators have intensified innovative efforts to vitalise higher education. We shall report here three such innovations. Two of them, namely, the Centres of Advanced Study and examination reform aim at improving the quality of teaching, research and evaluation. The third, the Jawaharlal Nehru University (JNU), is an innovation in institution-building and an attempt at institutionalising innovation.

### 1. Centres of Advanced Study

The University Grants Commission is concerned with the problems of quality and standards in higher education. In order to arrest the deterioration of quality, the Commission initiated the programme of advanced teaching and research in certain

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(1) Report of the Committee on the Governance of Universities and Colleges New Delhi - University Grants Commission, 1971, p.73.

(2) Nehru's Convocation Address at Allahabad University, 1947 quoted in Education Commission Report op. cit., p.275.

selected fields in 1963. The scheme was intended to encourage the pursuit of excellence and team work in studies and research and to accelerate the realisation of international standards in specific fields.

The idea of Centres of Advanced Study, it is believed, owes its origin to D.S. Kothari, an eminent scientist and Chairman of the UGC from 1961 to 1973. The argument underlying the CAS concept is that in comparison with the advanced countries of the world even the best Indian institutions are not suited for really high standards of research and teaching and that owing to the limitations on financial and human resources it is not possible to develop all university departments to internationally comparable levels of excellence. In such a situation it is logical and practical to identify institutions and departments which can be so developed. If this is done effectively, the students who graduate from these centres can staff other institutions and departments and this would also catalyse other departments.

Starting in 1963-64, Unesco contributed to the establishment of CAS under its Technical Assistance Programme; seven Centres received assistance under this project. The aid made available was in the form of experts or consultants services, training fellowships and scientific equipment. When the Programme was reviewed in 1967, three more Centres were included under UNESCO's Assistance Programme. Although support for CAS by UNESCO ended in 1974, a new project funded by the United Nations Development Programme and administred by Unesco was started in October 1975. It provides assistance to ten selected Departments. The amount of total foreign assistance received by the Centres/Departments during 1963-75 is as follows:

| | | |
|---|---|---|
| (i) | Foreign consultants | 85 |
| (ii) | Fellowships offered to Indians | 86 |
| (iii) | Equipment from foreign sources: | |
| | USSR | $ 1,005,267 |
| | USA | $ 167,690 |
| (iv) | Total assistance received: | $ 2,408,498 |

Thirty Centres of Advanced Studies have been set up in various disciplines at several universities as shown in the following table:

Table II.13

Centres of Advanced Study by Discipline*

| Science | | Social Sciences | | Humanities | |
|---|---|---|---|---|---|
| Physics | 3 | Economics | 3 | History | 2 |
| Chemistry | 2 | Education | 1 | Philosophy | 3 |
| Botany | 2 | Sociology | 1 | Sanskrit | 1 |
| Zoology | 2 | | | Linguistics | 2 |

| | | | |
|---|---|---|---|
| Geology | 2 | | |
| Mathematics | 4 | | |
| Astronomy | 1 | | |
| Biochemistry | 1 | | |
| Total | 17 | 5 | 8 |

* Source: UGC: Centres of Advanced Study in Indian University 1972, pp.3-4.

The Centres are supposed to function as all-India Centres for training and research in their respective fields. They have received special funds to improve laboratories and library facilities and appoint the necessary academic and non-academic staff to carry out expanded programmes of teaching and research. The Centres have also been given special fellowships to attract students and teachers of merit to do research. Funds have also been provided to construct suitable facilities for these expanded activities.

Focal points of excellence. The Centres have been conceived as "focal points of excellence" in their respective disciplines and attract students and teachers of high quality. The underlying assumption is that the various university departments and colleges are at different stages of growth and development, but that each department should be assisted to reach a stage when it could be recognised as a Centre of Advanced Study. Precautions have been taken to ensure that the Centres do not impinge upon the ordinary departments. It has, therefore, been decided that the expenditure on the Centres and related activities is kept within 10% of the total budget of the UGC.

Progress of the Centres. Most of the Centres have been creative in various ways. During the 5-year period between 1966-1971, over 2,000 students took their M.A./M.Sc. degrees from these Centres; 1,600 of these degrees were in science subjects. Similarly, 300 students were awarded Ph.D. degrees in science subjects and another 100 in other subjects. Some 3,000 research publications have been issued by the various Centres; 137 seminars have been organised, most of which on a national and a few on an international level. It is essential for the performance of the Centres to be of a consistently high quality. Advisory Committees consisting of Vice-Chancellors, professors of the Centres and outside experts have been constituted to guide them. The UGC appoints expert committees from time to time to assess their performance. The ratings of the assessment committees appointed in 1974 are summarised in the following table.

Table II.14

Assessment of Centres of Advanced Study[1]

| Rating | Sciences | Social Sciences | Humanities | Total |
|---|---|---|---|---|
| Excellent | 6 | 3 | 2 | 11 |
| Good | 5 | 2 | 2 | 9 |
| Average | 3 | - | 4 | 7 |
| Total | 14 | 5 | 8 | 27 |

(1) Based on information supplied by the UGC.

It is instructive to analyse the reasons why one-fourth of the Centres show only an average performance after ten years of operation. What kind of problems beset these Centres? Internal conflicts and lack of team work has been mentioned as one. Such internal organisational problems are likely to create external pressures from other "ordinary" departments of the university. The special treatment being provided to the Centres may promote a kind of academic exclusiveness, and they may become isolated from the rest of the university. The absence of even minimal facilities for the rest of the university departments tends to create feelings of jealousy and frustration among them. Such a situation tends to lower the quality of academic work all round and can accentuate non-academic pressures and unhealthy competitiveness.

It is rather early to assess the worth and achievements of the Centres. It will be a long time before they can take firm roots in the academic system. Given the short span of time they have been in existence the performance of the Centres is certainly commendable in the pace of the complex problems of excellence in education and research and of brain drain.

2. Examination reform

Indian higher education has long been marked by what is known as external examinations. Such an examination is given once at the end of the academic year. The question paper is set by an external examiner (and not the teacher himself). Generally such an examiner is from outside the university. He also examines the answer books, but where these are too numerous other external examiners are asked to assist the main examiner. A typical question paper contains some ten questions of which generally five are to be answered, all carrying equal marks. The answers are given in essay form. It is easy to understand the vagaries of such an examination. It has no direct link with teaching. A small question paper cannot cover the entire subject matter taught. The marking of answers is largely subjective. The same answers can be evaluated differently by different examiners. Instances where the teacher's assessment of a student is completely at odds with the evaluation of the examiner are not infrequent. The subjective nature of the marking and the limited coverage of the subject matter tend to reduce the reliability and validity of external examinations. Such a system encourages guessing, cramming and reliance on luck rather than a systematic study. The stranglehold of external examination is so powerful that it led the University Education Commission (1948-49) to say "if we are to suggest one single reform in university education it should be that of the examination". During the last few decades, education commissions and committees, government and public leaders and educators have repeatedly talked about reforming the system of examination. In the last few years the UGC has taken active steps in this direction. A plan of action has been prepared.[1]

(1) Examination Report - A Plan of Action University Grants Commission, 1973.

It is mainly based on the concept of internal assessment (to differentiate it from the traditional external assessment).

Internal Assessment. The concept of internal assessment is based on the principle that one who teaches should also assess student performance. This assessment is to be made internally by the teachers of the department. Another principle of this system is that progress is a continuous process and evaluation should therefore also be continuous, as against one short external annual examination. Such internal assessment is expected to promote regular study habits among the students and improve the coverage of the subject matter. As the teachers have a relatively long period over which to get to know the students, it is hoped that it will also be a more reliable evaluation system. Another important feature of the system of internal assessment is the technique of marking. Instead of a 100-point scale in a typical external examination where marks could range from 0 to 100, the new system envisages a seven to ten point grading system and an overall grade point based on the work done throughout the year.

The UGC has taken steps to accelerate the introduction of improved examination methods. Four zonal workshops on the system of grading were held at Delhi, Chandigarh, Bombay and Madras in December 1975. These workshops, which were attended by a large body of university teachers, considered the grading system as an integral part of educational reform, involving continuous evaluation, the restructuring of courses, the improvement of teaching methods and the modernisation of syllabi. The workshops were unanimous about the need for a grading system on either a five-point or a seven-point scale. They recommended a move to a system entirely based on internal assessment, whereby teachers themselves should award the final grades. They also suggested a procedure for obtaining a grade point average, based on the weightages given to each course and the grades received. It was suggested that the grade point average could be used even in universities where the new grading system was not being applied by converting the marks obtained by the students out of 100 to a letter grade on a 7-point scale.

The persistent and active steps taken by the UGC have activised the universities. Reports filed with the UGC show that some form of internal assessment programme is being implemented in 40 universities. Several universities are reported to have taken steps to develop question banks for examinations and to train teachers for this purpose.

3. Institutionalising innovation - the Case of JNU

In the last few years, increasing attention has been drawn to the growing irrelevance of the curriculum and instructional methods in higher education. A number of studies seeking to analyse the courses of student unrest during the last decade have found the students agitating for improved curricula and teaching and better educational facilities. The youth perceive the system of education as irrelevant and also as providing them with no future at the end of schooling. They have been demanding a total change in the system of education. Some universities have been trying to innovate in

curriculum development and teaching methods in order to make education more relevant to the changing socio-economic and political realities. One of the important factors, however, maintaining the status quo in university education is the department orientation in its hierarchical structure and organisation. The departments have been functioning in isolation from other departments, and often from the outside world. While the growth of academic disciplines is one of the important objectives of university education, the discipline based departments have tended to maintain the conservative and obsolete courses of studies and teaching methods and to resist innovation and change in curriculum and teaching methods.

The universities have tried always to jealously guard their autonomy. The real and more important problem, however, as the Education Commission Stated, is of academic freedom within the university organisation and in its various departments. It is "necessary to develop intellectual climate of fearless examination and presentation of issues. All efforts are needed to encourage it".[1] The hierarchical organisation, rigid and narrow discipline orientation, vested interest in the continuation of irrelevant and obsolete curricula, permanent headship of departments, general apathy towards and exploitation of the younger faculty members and research staff, invalid and unreliable traditional system of examination; out-moded teaching methods, paucity of library, laboratory and working facilities - all these and some more - combine to produce a drab, unstimulating and demotivating academic climate. Under such conditions the academic role of he head of the department and of other university authorities tends to be overshadowed by an authoritarian system which is not conducive to the best performance of the entire faculty. The autonomy of the department and freedom within it are crucial factors in creation of a sound academic environment.

The piecemeal innovations are not enough to generate confidence among the academic community and to release creativity in higher education. It was necessary to set up an innovative institution which would institutionalise some urgently needed innovations. JNU seeks to meet this need. It is not just one more university. It is distinctly different, with its emphasis on quality and excellence. In fact it can be viewed as a comprehensive organisation of Centres of Advanced Study. Many of the important educational changes have been incorporated in the University Act itself.

From the very inception of JNU there has been an awareness about the common problems of universities. Therefore, the concept of Centres as the academic unit has been provided in the Statutes of the University, which were framed along with the enactment of the legislation establishing this university. The university is organised in Schools which are multidisciplinary in nature and each school is organized into various Centres. A Centre is visualized as a community of scholars from disciplines which are linked with each other in terms of subject matter and methodology. The

1 Report of the Education Commission, op. cit., p.326.

structure of the university itself provides for the mechanics of interdisciplinary innovations in courses of studies. The five-year courses leading to a post-graduate degree are based on several kinds of interdisciplinary programmes. Teachers in different disciplines jointly teach courses. Similarly, interdisciplinary seminars are organised. It is hoped that as the Centres vigorously pursue excellence in their various fields of work, a specialised body of expertise would develop in the various disciplines. The specialists in the same discipline then could come together and form a department. The development of specialised department, therefore, is one of the important objects of the interdisciplinary functioning of the Centres of Studies.

The concept of Centres in the academic programmes of JNU could, therefore, be viewed as an important break-through in the Indian higher education. The rigidities born out of vested interests which have been making changes in curriculum and teaching methods difficult have thus been weakened. The individual faculty members have now more freedom to conduct interdisciplinary research and teaching. It can be hoped that this new university functioning on the basis of Centres would be able to innovate towards the development of socially relevant courses and methods of teaching. Already, in the acts and statutes of some universities, established after JNU, provisions for setting up Centres like those in JNU have been made and this innovation is getting replicated much faster than it was anticipated.

Examination reform at JNU. The student assessment at JNU is wholly internal and is continuous throughout the semester when the studies are in progress. This has been introduced with a view to encouraging flexibility in course structures allowing scope for interdisciplinary courses. The concept of final examination as prevalent in most universities is unknown at JNU. The tutorials and sessional assessments have about 50 per cent weightage. The Cumulative Grade Point Average is obtained on the basis of various assessments. The Grade Point Average determines the rank and class of the student. Each course has credit points. A 10-point Grade Scale is used for evaluating the performance of a student in a given course. The Cumulative Grade Point is obtained by multiplying the Grades by credit points for each course and then summing up the total and dividing by the total number of Grades offered by the students in a particular semester. The innovation was also introduced in post-graduate teaching. A 10-semester programme leading to a post-graduate degree has been launched with a coverage of two semesters every year. Ample flexibility has been kept in the programmes so that the qualified students can enter at the various points of this 10-semester programme.

Thus, flexibility in curriculum, collaborative and team teaching of interdisciplinary courses, interdisciplinary research, continuous and internal assessment of the students' performance, and a programme of interdisciplinary seminars are all inter-related innovations in higher education introduced at JNU.

Governance and management of the university. Studies of student unrest have repeatedly pointed to the unresponsiveness and exclusiveness of the university administration as being one of the most important causes of student unrest. The students have been agitating for reforming the university administration, for participation in decision-making and management of education.

The Commission encouraged the formation and functioning of students' unions and participation of students in various committees including the academic council. The Gajendragadkar Committee on the Governance of Universities and Colleges also favoured student participation in decision-making but limited it to forums like Committees on Student Welfare. They did not favour student participation in the academic and executive councils. It, however, pointed out that "the students desire such participation with the object of making education received by them richer, deeper, more meaningful and significant. In other words, the students' desire for participation is founded on academic and not political considerations".[1] Following the submission of the report of the Committee, there was widespread discussion about the issues of the governance in university education. As a result several State Legislative Assemblies amended the Acts of State Universities providing for teacher and student participation in academic as well as in executive bodies of the universities.

Democratisation of the governance and management of higher education is important not only for the effective functioning of the university but also for the development of a democratic way of life among the students. Innovations in curriculum, teaching methods and examination system can be seriously handicapped without the active participation of the students and teachers concerned. Their increasing association with reforming and changing of education, therefore, is essential. Management of education itself needs continuous review. Development of internal academic leadership, strengthening of the teachers' and students' commitment to work and study, and all round reform of university education in order to make it an effective tool of development and social change need continuous attention. There is a need to diffuse widespread participation of teachers and students in order to achieve such goals. Experience shows that association of some elected representatives with various decision-making bodies is not enough. There is a need also for widespread participation and democratisation of the governance of education. This is necessary for releasing and canalising creative energy for innovation and change in education.

JNU is again the leading university where student participation in governance and management has been introduced at various levels. There is a provision for (a) Council of Student Affairs consisting only of student members with the Dean of the Students as the Adviser, (b) Student-Faculty Committee consisting of five teachers and five students at every Centre, (c) Board of the School with one student from each of the Centres of Study elected from amongst the students of the Centre, (d) Academic Council with two students from each School. Besides the above committees and councils, the students have been given representation in a number of Committees for Library, Students Aid, Students Fees, Students Mess, Hostels, Cultural Activities and Sports.

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1 Gajendragadkar Committee Report, op. cit. p.74.

Departmental headship. In most universities the statutes provide for a permanent headship in the sense that once a professor becomes head he almost continues till he retires. The concept of permanent headship, therefore, gives considerable powers to the incumbent. By virtue of his being the head of the department he sits on various university committees and bodies, and other teachers of the department look to him for favours and facilities. Over the years, the professorial role of the professor has become less important as compared to his administrative role as the head of the department. One observes numerous cases, too numerous perhaps, where the pursuit of power and influence is more important than the pursuit of academic excellence and research. The corresponding attitudes and behaviours conditioned by such a situation tend to percolate down the line and vitiate the climate of the university. The conditions thus created make the functioning of the departments less and less participatory. University teachers have, therefore, been demanding replacement of permanent headship by the concept of rotational headship, and democratisation of departmental functioning. Although not a great innovation, rotational headship certainly weakens the rigid power structure of the academic set up of a university. JNU is one of the universities that has taken the lead in this respect. Each Centre has a rotational Chairman.

The academic role of the university teacher is being revaluated. University after university has now amended its Acts and Statutes to provide for rotational headship. Internal assessment, interdisciplinary approach to research and teaching, association of students and teachers and with decision-making, and rotational headship are likely to promote a chain of other desirable reforms in university education. The imperative need, as the Education Commission has put it, is to promote the prestige of the academic roles, i.e., of teaching and research, as against the administrative roles. It is necessary that the universities' academic climate becomes work and achievement-oriented, rather than control and power-oriented.

Experience with innovative programmes like internal assessment as well as rotational headship, however, has not altogether been happy. Quite frequently internal assessment has become a tool of favour distribution. It is vulnerable to pressures from all sides, most powerfully from students. Lack of proper preparedness and training on the part of the teachers as well as the students can make internal assessment a routine and an easy way of evaluation. Internal assessment and semester courses would require greater work on the part of the teachers and students. Without adequate preparations and the provision of necessary facilities like library, laboratory, teacher's room, office rooms, canteens, student homes, scholarships, , etc., the scheme of internal assessment may not yield the desired results.

The same is the case with the governance of departments under rotational headship. There are instances where the new incumbents and the outgoing ones have got involved in differences and conflict. Rotational headship in such cases accentuates the power game instead of weakening it. In this process the main goal,

i.e., to augment the pursuit of academic work, is the first casualty. Academic work is further weekened by the climate of quarrels and conflicts.

## III

## CONCLUSIONS AND FUTURE PERSPECTIVE

Sri Aurobindo said, "For a mathematical problem, sometimes the solution comes quickly, sometimes it takes too long".

The search for an appropriate system of higher education in India is like a mathematical problem to which the solution has not yet been found. The search is on. Innovations described in this paper are attempts by men of wisdom and practical sense to find solutions to the problem as they visualised it.

It is attempting to transport oneself to the idyllic setting of the ancient universities and schools hidden in the forests. When Tagore said that life is worth living which strives for the Supreme Spirit and described the ancient times in which the Upanishads and the Vedas were composed as the Spirit of India, for which the nation should strive, he was not able to share the deeper understanding of the statement with his countrymen. For, although a life of simplicity and endless pursuit for Truth and the Supreme Being may be worth recapitulating, does it really have an answer for India of the 20th century with its myriad problems ? Visva-Bharati attempted to recapture the past while at the same time attempting to absorb the modern scientific method and the ideas of rural reconstruction. In his life time, students thronged to Visva-Bharati to have the experience of living and to breath in the same environment in which the great poet lived. It was difficult at all times to run a university level institution without adequate funds committed to it by a steady resource; after the death of Tagore and Gandhi, if for no other reason than just financial survival, Visva-Bharati had to look to the government for support. In spite of the eloquent disclaimers of the Education Minister, the implication of financial dependence on government was conformity. Tagore's avowed intention not to make Visva-Bharati a machine which printed the sign of a degree and made bales of human beings was also out of times. Although students came from all parts of the country for the romance that was Santiniketan, the need to grant nationally comparable certification to students was felt even while Tagore was alive. No university can plan for self-employment or employment in the unorganized sector alone for all its pupils, and if a certain proportion of the alumni of Visva-Bharati had to seek employment with government or in the open market, they would have had to show something like a university degree. The hold of the degree on the system of education is something which all innovations have to face.

The innovations which owe their origin to the philosophy and the ideas of Gandhi are of greater significance than Visva-Bharati. Gandhi attempted to make Gujarat Vidyapeeth an instrument of the struggle for freedom and just as he was being imprisoned from time to time so also Gujarat Vidyapeeth remained closed for a number of years. In fact, the Vidyapeeth was in a very experimental stage during the first 10 years of its founding and soon thereafter it was closed down until after independence. Till then the Vidyapeeth remained more an idea

than an institution, a symbol of Ganhian correlations; correlation between academic and productive manual work, between academic work and social service and between academic work and community living. Like most Gandhian ideas, the ideas which gave shape to Gujarat Vidyapeeth were based on profound commonsense and a deep understanding of the conditions in Indian villages. For this reason those ideas have a special meaning for the Indian situation. The Gandhian educational thought also forms the bed-rock over which the Lok Bharati is founded. This institution, stituated deep into villages and not fully supported with funds from government, is strenuously adhering to what is considered to be the essence of the Gandhian thought. One of the marked differences between these two institutions is that while the Gujarat Vidyapeeth, after being declared an institution deemed-to-be-university because fully dependent for its finances on the Government, Lok Bharati never became so dependent. The uniformity and conformity which are a corollary of dependence on government for financial support have affected the work of the Gujarat Vidyapeeth also. For example, changes introduced from time to time in the pay scales of their employees to bring them in conformity with those applicable in Government of India violate the old Gandhian objective of simple living and self-denial. Admission of representatives of government on its bodies is not necessarily of advantage for an autonomous institution. On the other hand, Lok Bharati is all the time obliged to raise funds of its own and is also able to withstand pressures from government as well as its staff to run it on the lines indicated by the former. Apart from the different character of support which they seek from government the two other main differences between the Gujarat Vidyapeeth and Lok Bharati need to be noted. Gujarat Vidyapeeth prepares workers for rural work; Lok Bharati prepares villagers to work for themselves; and secondly while the former continues to rigidly adhere to the traditional Gandhian crafts, Lok Bharati has made agriculture the central vocation.

One of the hopeful signs in the years since independence is the increase in the number of institutions like these two. It is conceivable that if rural development takes place through a well-knit system of cooperative societies, and voluntary agencies continue to receive from government discrete and adequate financial support it is probable that innovative institutions with strong rural bias will not only survive but will increase in numbers.

The rural institutes were a well-intentioned but ill-conceived scheme. They were not designed to become an organic part of the educational system and were therefore rejected by the system, as a bad graft is rejected by the human body. In spite of its many weaknesses, the scheme of rural institutes might have survived if they were made a part of a new system of rural .... had come from a school system which was also designed for rural areas. The rural institutes existed without any school-level foundation and also without any university level academic guidance suited to regional needs. A comparison of Gujarat Vidyapeeth and Lok Bharati with the rural institutes shows that the former were supported by a vast supporting organisation of Gandhian elementary and secondary schools, the students of which could have pursued higher education only in an institution like the Gujarat Vidyapeeth or Lok Bharati and they prepared young people for the rural areas.

+...education and if the students who were to be educated in the rural institutes

The Constitution was a landmark in our history, not only because it declared India a sovereign democratic republic but for giving directions which have influenced state policy since. The Directive Principles of State Policy, relating to the listing of the Scheduled Castes and Scheduled Tribes has formed the corner-stone of the policy of equalisation of educational opportunity. In spite, however, of several significant gains in this direction, the kind of education available to the weakest sections of the society is unequal. The source of this inequality is within the system. Although in India we are making strenuous efforts in the direction of achieving a socialistic pattern of society, and the disadvantaged sections of the society have been emancipated from almost all the handicaps which they faced for centuries, the basic character of the society continues to be unequal. Similarly the school system, with a number of institutions imparting instruction through the medium of English and an overwhelming majority of government institutions imparting instruction through the regional languages with unsatisfactory physical facilities, is obviously unequal. These inequalities, caused by family background and unequal school system, are carried over at the university stage and it is rarely that persons belonging to SC/ST are able to come up to a level of equality with students coming from the upper strata of society. Another aspect of inequality is that within SC/ST are some prosperous groups and it is those that carry away most of the facilities and incentives provided by government in the form of protective discrimination. It is more than evident that although education may slowly, over a period of several decades, reduce inequalities, to hope that it will usher in the near future in an era of social and economic equality must be considered unrealistic.

The experimental steps envisaged under the scheme of correspondence courses and National People's University are yet to come to a stage where comparable conclusions can be drawn. Suffice it is to say that correspondence courses and non-traditional media of instruction hold a most interesting promise for India.

The country's determination to proceed ahead with a massive programme of industrialisation as well as the resolve to become self-sufficient in food have given a new dimension to technical and agricultural higher education. Viewed in this context, the Indian Institutes of Technology and the Agricultural Universities seem eminently related to the country's future needs. IITs have established enormous capability of technological and engineering education which make them internationally comparable. The manner in which they have been able to liaise with industry is an example of relating higher education to the needs of development. Besides, the manner in which each of the five Institutes has been able to maintain uniformly high standards in almost all departments is a marvel of effective planning and execution. Although the well-developed departments of social sciences in the IITs have helped the students of those institutions to acquire a social consciousness, the benefits of the research and development being organised in the IITs are going mainly to the large and sophisticated industry. The extension of R and D to small entrepreneurs is limited; and IITs are just beginning to concern themselves with the problems of rural

development. In a country like India rural orientation has to cover all types of higher education; since rural development can hardly be visualised without technological advance, IITs should pay greater attention to rural needs.

It is true that in the institutions under the control of different State Governments standards can hardly be uniformly good; yet the vast variations in the standards of agricultural universities call for a review of the factors which enable some universities to attain high standards and not others. If some of the agricultural universities are not able to progress because of the reluctance of the State Governments to make the best use of them, there is need for the Government of India to take up the matter with the State Governments. A comparison between the IITs and the agricultural universities leads to the conclusion that the IITs have been able to maintain uniformly high standards because of the support provided by the Union Ministry of Education and by the Council of the IITs. This has been possible because the Union Government can play a decisive role in respect of such institutions of national importance. Agriculture is, however, a subject within the ambit of the states and therefore the Ministry of Agriculture, which is responsible for agricultural education, is unable to play a similar role. The second conclusion from a comparison between these two categories of institutions is that all students for whom an understanding of social relationships and social dynamics is of importance should have a study of social sciences built into their curricula. Each IIT has a strong social science faculty, but these subjects receive little importance in the Agricultural Universities. However, the strength of the Agricultural Universities lies in the manner in which they have been able to integrated teaching, research and extension functions and the effect these universities are having on the country's agricultural production.

It has been observed by several commissions and committees that the content of university education is not modern and the methods of teaching are archaic. However, unless the whole system, or within a system one whole institution, is changed it is doubtful if isolated change here and there can make much difference. It is from this point of view that one should view JNU a whole institution geared for innovation and for institutionalising innovation. To the extent that JNU has become the model for all progressive universities established in recent years, it seems that State Governments and the academic world are willing to emulate innovative arrangements.

It would be worthwhile to recapitulate the major conclusions arrived at in the analysis of successes and failures of the innovations described in this paper.

The first important inference is that dependence on government for finances tends to introduce the element of conformity. It is, however, neither necessary nor practicable

to altogether shun government assistance for an innovative measure. We have observed that where an institution is not dependent on government funds, as in the case of Lok Bharati, it has a better prospect of succeeding in retaining the essential characteristics of the innovation.

The second conclusion is that an innovation which dispenses with the need to grant university degrees, without at the same time securing recognition of its diplomas and certificates from the likely employers, begins with a serious disadvantage. Although it is true that degrees of different universities are seldom comparable and the methods of examination prevalent in India are hardly the best way of evaluation of pupils, so long as degrees form the basis for employment, and for much else, the need for acceptable certification even by innovative institutions cannot be overlooked. In this context it is recalled that the diplomas awarded by Gujarat Vidyapeeth and Lok Bharati are recognised for the purposes of employment. On the other hand, the diplomas and certificates awarded by Visva-Bharati and by the Rural Institutes were practically unrecognised and this became a major handicap for these innovations.

The third conclusion is that a radical departure from the existing system can be sustained only if it creates its own sub-system, and not if it exists in isolation from the system and does not attempt to create an organic sub-structure to sustain it. Creation of a sub-system involves creation or existence of infrastructure of elementary and secondary schools to prepare students for the innovative higher education institution, a machinery for social and academic consultation, and linkage of the innovation with opportunities of employment or self-employment. Gandhi fully visualised this aspect in his system of national education, and gave much greater importance to the infrastructure level than the superstructure. The success of the IITs and the Agricultural Universities is somewhat limited, partly because the students who are admitted to these institutions are educated in the traditional school system. The IITs, however, have a distinct advantage because they have a rigorous admission test and are able more or less, to identify students who could benefit from the system they have evolved. The University Education Commission (1948-49) had a very clear view about this aspect but this was not adopted in the scheme of rural institutes. The rural institutes failed mainly because they were developed on an urban oriented system of secondary education and failed to build up a sub-system necessary for the survival of the innovations.

The fourth conclusion relates mainly to the innovations coming under the broad rubric of measures for equalisation of educational opportunity. The result of the measures taken by government is that a much larger number of persons belonging to the weaker sections of society are able to pursue higher education than would have been the case had these facilities and incentives not been provided. The limiting factors in the measures taken so far is that while steps are taken towards

equalisation of opportunities by drawing new sections of the society into the sphere of formal education, there is an inbuilt arrangement for continuing inequalities. This is because, exceptions apart, persons belonging to the weakest sections of society seldom get an opportunity to get education in institutions of good quality and even when such institutions can be persuaded to admit these persons they suffer from the disadvantage of their home background and the kind of school education they have had. What is incumbent on government as far as the weaker sections of society are concerned, is constant vigil and relentless pursuation and, where necessary, coercion, in respect of institutions of good quality so that they not only admit candidates belonging to the weakest sections of society but also provide necessary arrangements for them to be able to have equality of success. There is also a need to apply the means test, that is, the check to keep out the prosperous and the influential among the weaker sections.

The fifth conclusion is that the problem of medium of instruction at higher education level remains untacked. Higher learning in India has always been in the language of the privileged few; whether it was Sanskrit, Persian or English. The only innovation which squarely faced this problem was the Gandhian institutions. For the rest, English continues to be the medium - much so that even in Agricultural Universities, a large number of whose alumni can be expected to work in the rural areas, the courses are organised almost exclusively in the English language. This is one more evidence of the fact that the innovations bring improvements in such a manner that it does not upset the dominance of the elite.

The sixth conclusion from an analysis of the innovations described in this paper is that innovations which ultimately benefit the affluent sections of society have an in-built advantage. For example, agricultural universities undertake research which helps to develop a more sophisticated technology in agriculture and animal husbandry and only the persons who have large land holdings can make use of that technology. Similarly, the research and development work of IITs gets related to the needs of sophisticated industry and the technological needs of the rural people remain comparatively neglected. So, whereas IITs and agricultural universities have enormous successes to that credit, it would require a good deal of strenuous effort on the part of these institutions before they can begin to serve the needs of the common man.

Finally, and this is the seventh important conclusion, there are some significant indicators regarding the role of government in innovations in the field of higher education. Costs in higher education are much higher than for school and adult education and, therefore, it is seldom possible for important innovations in higher education to be sustained without government's financial support in some measures. The record of the government, more or less uniformly since independence, has been to stimulate and support innovative activity, yet whenever an institution became totally dependent on government funds its

innovative character tended to get diminished. And this happened despite government's explicit disclaimers on the occasions when full support was given to Visva-Bharati, to Gujarat Vidyapeeth, to rural institutes set up by voluntary agencies, to Jamia Millia Islamia, and so on. In the last few years, government themselves, as also the University Grants Commission and the All-India Council for Technical Education, the national level agency for technical education, have functioned as agencies responsible for some important innovations. Establishment of a large number of Centres of Advanced Study, reform of the examination system and establishment of universities like Jawaharlal Nehru University could not have been brought about except by government action. Each of these programmes requires not only wisdom and vision but very substantial financial support and influence with State Governments and Vice-Chancellors and university professors.

While submitting the report of the Education Commission (1964-66) to the Minister for Education, its Chairman stated the following in his letter:

> Education has always been important but, perhaps, never more so in man's history than today. In a science-based world, education and research are crucial to the entire developmental process of a country, its welfare, progress and security. It is characteristic of a world permeated by science that in some essential ways the future shape of things is unpredictable. This emphasizes all the more the need for an educational policy which contains a built-in flexibility so that it can adjust to changing circumstances. It underscores the importance of experimentation and innovation. If I may say so, the single most important thing needed now is to get out of the rigidity of the present system. In the rapidly changing world of today, one thing is certain: yesterday's educational system will not meet today's, and even less so, the need of tomorrow.

This has to become the corner stone of government's policy towards the future of education. The responsibility of government in this field will require it to take some fundamental decisions, in particular, the following:

(1) Scouting for and supporting innovative institutions: In every society there are people who keep striving for new ideas and practices and often do not even become known for having done so. Many genuinely innovative persons and institutions do not like to seem to be doing so; it is quite unlikely that they would want to apply for government support. It is necessary to discover such institutions and individuals and to provide appropriate support to them.

(2) Discreet financial support. Excessive financial support can prove to be a handicap for an innovation. So also the absence of it altogether. Once a genuine innovation has been identified, financial support should not be linked with individual items of expenditure but should be provided in a

lump-sum, to be utilised by the institution concerned in the most approriate manner. The requirements of audit would also have to be reviewed to ensure that these institutions are not harassed.

(3) Encouragement to creation of sub-systems. It is improbable that a significant innovation which does not create its own sub-system could survive for long. Creation of sub-systems includes innovative changes at the level of secondary and elementary education. There is, however, a constant urge to have a national system of education, which implies a similar system all over the country. The need to have sub-systems to support an innovation would, therefore, require government not only to grant permission for varying sub-systems but to encourage innovations at all levels of the sub-systems.

(4) Delinking employment from degrees. In the present system almost all venues of employment are inescapably linked with degrees and certificates recognised by government. The reliability of university degrees being what it is, wise people have long since lost faith in them. However, innovations like Visva-Bharati and rural institutes and even examination reform can result in disastrous failure, unless there is a change in the employment policy of government. Specific examination can be conducted to adjudge suitability of candidates for a category of posts.

(5) Autonomy. Although bodies like UGC, the All-India Council of Technical Education, as well as Central Universities and IITs are autonomous institutions, the general climate tends to abridge autonomy and the exercise of initiative. The idea of autonomy is not to be linked only to the passing of statutes creating autonomous institutions, it must permeate the system itself. So far the emphasis is only on autonomy from government control, those who are the protagonists of such autonomy often curb autonomy of departments within universities and departments curb the autonomy of individual teachers. Similarly universities tend to suspect the demand for autonomy by colleges and the colleges suspect initiative by individual teachers. It is only when the spirit of autonomy is universalised and the concept of control and authority are replaced by trust and freedom of action that real innovations are possible.

It would, however, be naive to imagine that a change in government attitude can by itself stimulate innovation. The authoritarianism and rigidities in the educational system after all reflect society's stratification and its hierarchical order. If initiative and risk taking among the young is not valued in society, it is improbable that any system within that society, whether it is the system of government, the system of education, or any other system for that matter, can get over the rigidities and become elastic and innovative. This is particularly so in regard to innovations which question the caste and class relationships established over the centuries. However, for an innovation to have a long-term influence over the system it must question these age-old relationships. It is only when

educational innovations begin to so question and explore ways of establishing a truly egalitarian socialist society that they will acquire social relevance. It is in this perspective that plans and programmes should be prepared.

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